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Richd Bourn

THE

MEDICAL MIRROR;

OR

A TREATISE ON THE IMPREGNATION

OF THE

HUMAN FEMALE.

SHEWING THE

ORIGIN OF DISEASES,

AND THE PRINCIPLES OF

LIFE AND DEATH.

WITH REMARKS ON THE GENERAL EFFECTS

OF

SEA-BATHING.

BY THE LATE E. SIBLY, M.D. F.R.H.S.

THE FIFTH EDITION.

ILLUSTRATED BY ELEGANT COPPER-PLATES.

LONDON:

PRINTED, FOR THE PROPRIETOR, BY LEWIS AND HAMBLIN, PATER-NOSTER-ROW; AND SOLD BY CHAMPANTE AND WHITROW, JEWRY-STREET, ALDGATE; AND AT NO. 17, AVE-MARIA-LANE, ST. PAUL'S.

1807.

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PREFACE.

IN this MIRROR, every Patient may behold, not only the true picture of his own diſorder, whether hereditary or accidental—chronical or acute—but may alſo perceive the direct and obvious road to an immediate cure; particularly in relaxed and debilitated conſtitutions; in lowneſs of ſpirits, and weakneſs of nerves; in Scrophula, Rheumatiſm, and Gout; and in all complaints which have their ſource in a tainted or corrupted ſtate of the blood, in vitiated lymph, or in ſpaſmodic affections of the nervous fluid, irritating the muſcular ſyſtem, the brain and vital organs of the human machine.

The tender and bluſhing Female, whether married or ſingle, may here diſcern the admirable ſtructure of her frame, and its natural indiſpoſitions, with ample directions how to conduct herſelf, without wounding her delicacy by communicating her ſymptoms, her fears, or her apprehenſions, to the rude ſcrutiny of pretended friends.

The country doctor and profeſſional accoucheur, if they dare diveſt themſelves of pecuniary views—and the affluent lord or lady of the manor, if fraught with benevolence of heart—may here view a ready

means to ſtop the anguiſh of the tortured patient, and to relieve the poor diſeaſed huſbandman, whoſe avocation ſubjects him alike to the ſeverities of all ſeaſons, and to that infinite variety of ſickneſs, ariſing from alternate cold, heat, fatigue, and want of proper food and clothing, which is every where felt among our village poor.

Above all, the uncomplaining ſeaman, who, ſubjected to the ravages of the ſcurvy, yet cheerfully braves the thunderbolts of war, and in ſpite of winds and waves keeps from our peaceful ſhores the devaſtations of our foe—and the poor ſoldier, who ſhrinks not from the ſanguinary charge, but, regardleſs both of danger and death, bleeds in his country's cauſe,—are ſurely the firſt objects of medical care and comfort. Their perilous ſituation, in the preſent war, powerfully ſolicits us in their favour, draws out our compaſſion to feel for their ſufferings, melts us at every new picture of their diſtreſs, amd urges us to ſeek the balmy oil of the good Samaritan, to heal their bleeding wounds. In this Mirror ſuch a balm is diſcovered, which, if applied in time in all thoſe complaints originating in the Blood, may preſerve to their relatives and friends many thouſand valuable members of ſociety.

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THE

MEDICAL MIRROR.

OF THE IMPREGNATION OF THE HUMAN FEMALE.

IN contemplating the Works of Creation and the Word of God, unfolded to us by the light of Revelation and Scripture; by analogy, reaſon, medical experiments, and anatomy, we are enabled to trace the human œconomy farther in her retirement, and deeper in her occult retreat, than ſome medical men are willing to allow. Impoveriſhed by a faſhionable ſtile of living, and driven to a neceſſity of multiplying potions and fees, their object is not to heal, but to nouriſh the ſeeds of human infirmity. The truth of this remark has been but too often experienced; and indeed *confeſſed* by ſome, in thoſe awful moments, when diſſimulation would be vain. Far be it from me to arraign the profeſſional character in its general capacity: it is only the medical locuſts that I wiſh to eradicate: and I am perſuaded every good man in the faculty will, with heart and hand, aſſiſt me in ſo laudable

ble a purſuit. It was principally with this view, and to aſſiſt private families in the moments of extremity, that I was induced to offer thoſe ſimple modes of cure and ſelf preſervation, ſo amply diſpenſed in my edition of the Family Phyſician. And my preſent purpoſe being to make that invaluable family book ſtill more complete, I ſhall here explain the nature of human generation, and the principles of animal life, that I may from thence deduce the origin of hereditary diſeaſes, and point out with more facility thoſe which are accidental. And in this Treatiſe I ſhall endeavour to furniſh my readers with ſuch obvious directions for *eſchewing the evil, and chooſing the good,* as, if reſolutely followed, will not fail to preſerve health and long life, and prove of no ſmall benefit to future generations.

When God created Adam, he planted in him the ſeeds of that Divine Eſſence requiſite to propagate the human *life* and *ſoul.* Theologiſts may contradict me; yet I will not ſo much derogate from the wiſdom and omnipotence of the Creator, as to ſuppoſe he ſhould watch the impregnation of every human female, and by ſo many ſeparate and diſtinct acts of his power give life, ſpirit, and ſoul, to the fœtus. The Creator of Man, viewing with unbounded foreſight the purpoſes before him, by one act of his omnipotence, blended in Adam all the faculties of the human and celeſtial nature; and, without any doubt, when he was formed *one,* in God's expreſs *image,* he poſſeſſed the means of propagating, from his own eſſence, beings like himſelf. It is here difficult to aſſociate the imperfect ideas of human

man reaſon with the mechaniſm of Divine Wiſdom; and yet our conceptions may in ſome degree unravel the myſteries of nature by cauſes and ſpeculations, which, in proportion as they captivate our ſenſes, and raiſe our admiration, excite in us a reverential awe of futurity, and a grateful ſenſibility of the goodneſs and mercy of Him who gave us being.

From the evidence of ſcripture it is manifeſtly clear, that in the perſon of Adam the male and female properties were originally combined; as indeed we now find them in many ſpecies of the lower claſs of animals; conſequently the expreſſion of *male* and *female*, does not neceſſarily imply two diſtinct bodies. In Geneſis i. 27, we read, that *God created man in his own image*, i. e. of perfection; including or containing the prolific or generating powers, which are diſtinguiſhed by the expreſſion of *male* and *female;* and *God bleſſed them*, i. e. theſe male and female properties, *and ſaid unto them, Increaſe and multiply, and repleniſh the earth*, i. e. with beings like Adam; for this benediction, and this command, were *antecedent to the formation of Eve*, as every one muſt know who reads the firſt and ſecond chapters of Geneſis.

In this *plural* capacity, therefore, Adam received the bleſſing of God, when he ſaid unto him, *Be fruitful and multiply, and repleniſh the earth, and ſubdue it; and have dominion over the fiſh of the ſea, and over the fowls of the air, &c.* The ſix days creation were now completed; and on the ſeventh day God reſted from all his work; and having formed Adam, and breathed

into

into his noſtrils the breath of life, *he became a living ſoul.* God alſo planted the garden of Eden, and put the *man* into it, to till it, and to dreſs it; and God commanded the *man,* ſaying, Of every tree of the garden thou mayeſt freely eat; but of the tree of the knowledge of good and evil, thou ſhalt not eat of it; for in the day that thou eateſt thereof, *thou ſhalt ſurely die.* Gen. ii. 27.

Let us here remark, that all theſe tranſactions, injunctions, and commands, had paſſed *before Eve was formed,* or, in other words, before the male and female eſſences were ſeparated and made the eſſential parts of two diſtinct perſons. Adam likewiſe, before this event took place, was appointed God's viceroy over all earthly things, both animate and inanimate; the very elements being made ſubject to him; for "*he was formed more noble than the angels, and crowned with glory and honour;* i. e. having the peculiar advantage of *multiplying his own race.* He was, as to his external form, moulded of the celeſtial æther; and therefore, previous to his fall, his body emanated rays of brightneſs and ſplendour, ſimilar to thoſe which our ideas furniſh of Moſes and Elias when they converſed with God. His reaſoning faculty, and *living ſoul,* were formed of the *eternal* eſſence or tincture of the Divinity; being nothing leſs than what is termed the *breath of God,* that ſpark of immortality which generates the *ſoul,* and is the diſtinguiſhing characteriſtic between man and beaſt. For, although brute animals inherit the five ſenſes, and poſſeſs an inſtinct to direct them in the choice of food, and to impel the propagation of their ſpecies;

yet

yet theſe are only the ſenſes formed from the *out-birth*, or four elements of nature; and not from the *eſſence* or *tincture* of the Divinity, out of which the ſoul, the mental intellect, reaſon, ſenſe, and underſtanding, are all formed, and transferred to poſterity. "*For with the powers God hath endued man, with the ſame powers ſhall he multiply his race.*"

From the foregoing paſſages we are warranted to infer, that the original man was poſſeſſed of his ſpiritual ſoul, and rational intellect, for the purpoſe of propagating the ſame to all future generations. By the force of this rational intellect, or eternal ſpirit, unclouded by the deformity of ſin, he knew and perceived the nature and property of every animated being; and to exerciſe this intellect, God brought before him every created thing, to ſee what he would call them; "*and whatſoever Adam called them, that was the name thereof.*" He knew and perceived the nature and quality of all animals; and according to their deſignation and ſubjection to the external elements, ſo he aſſigned them thoſe characters which they have ever ſince borne. Adam, however, in his primeval ſtate, was not himſelf under the influence of celeſtial or terreſtrial elements; but, on the contrary, they were ſubject to his controul. He was immortal; they corruptible. They ſprung out of Time, and were elementated; he ſprung from the limbus of eternity; and into eternity the divine eſſence, or ſouls propagated from him, muſt indiſputably return.

But man, thus created in honour and immortality, abideth not. The purpoſe of his creation was to fill the place of the rebel angels; and hence Lucifer became his mortal foe. This fallen ſpirit had entered the gate of Eden, and was preparing to ſeduce Adam, when the Almighty conſtituted the teſt of his obedience; for having endowed him with a *free-will*, an innate power of chooſing *good* or *evil*, and of multiplying the ſame, it was but reaſonable to expect from him an implicit obedience, and an angelic race. He that is alone eternal and omnipotent, could not but foreſee the ſubſequent event; and it is his ſupreme goodneſs to counteract evil, by preventing its worſt conſequences. Foreſeeing that the prolific tincture, or eternal eſſence of fecundation, might be contaminated by the malignant ſpirit of Lucifer infuſing itſelf into the mind of Adam; who then, inſtead of multiplying an angelic race, would generate devils; and that were man to fall in this plural capacity there was no counterpart, no feminine principle, through the medium of which the *ſerpent's head could be bruiſed*, or a Saviour become incarnate:—therefore, on a further ſurvey, after the works of creation had been completed, animals named, and man formed and compounded of the male and female tinctures, God ſaid, Gen. ii. 18. *It is not good that man ſhould be alone; I will make him an help meet for him;* wherefore the rib, i.e, the *feminine* or *conceptive* eſſence, was taken out of Adam, and concentrated or moulded into a new being, called woman. The emiſſion of this feminine eſſence or tincture, threw

Adam

Adam into a deep ſleep ; yet when he awoke he knew that an eſſential principle had departed from him, and that the woman was *bone of his bone, and fleſh of his fleſh,* not having been created, *but formed out of himſelf,* whereby he only retained the animating principle, or active power of generation ; whilſt the rudiments or ſeeds of future beings were conſigned to the matrix of the woman. Here then individual generation ceaſed ; and Adam, without the *counter-part of himſelf,* had no longer power to increaſe and multiply. Thus the two tinctures, or divine eſſences, animating and compounding ſoul and body, were divided ; and by means only of a re-union or contact of thoſe tinctures, could generation then, or now, be performed. It is on this ground that the male and female affections are continually turned towards each other ; and that the deſire of love and union ſo ſtrongly pervades every individual of the human race. Hence alſo the Tempter's reaſon for beguiling Eve, and hence the ſeducing power of love, which determined Adam to ſhare in all the horrors of her crime, ſo pathetically and affectingly deſcribed by Milton, in his Paradiſe loſt.

The fatal conſequences of the fall, we moſt ſenſibly feel, and univerſally deplore. The earth ſhook from its foundations. The order of nature was quite inverted. The ætherial and terreſtrial elements, which before were faſhioned in harmony, and acted in uniſon, were now diſcordant, intemperate, and furious. Brute invaded brute, and bird preyed upon bird. The delicious fruits and flowers of Paradiſe were exchanged

for thorns and thiſtles. The ſerenity of a pellucid and ſmiling firmament, was convulſed by the thunders of an incenſed Deity, by forked lightnings, by contending ſeaſons, by devouring winds, and impetuous ſtorms. Whilſt man, ungrateful man, from the privilege of holding theſe elements in ſubjection, became ſubjected to them; and hence ſubject to all the perils and misfortunes of his fallen nature.

Here, then, began the conflict of the human paſſions, as violent and ungovernable as the elements themſelves Here the toil and labour of the man, who ſhould *earn his bread by the ſweat of his brow,* and the tears and travail of the woman, who ſhould *conceive in pain and ſorrow,* had each their ſource. Here likewiſe, the dark catalogue of human infirmities, of diſeaſe, and death, had its too early date; yet to this æra, which gave birth to our manifold misfortunes, muſt we look for that benign ſource of alleviation and cure, which the relenting hand of Providence has graciouſly afforded to thoſe who will ſeek for them; *for out of the ground hath the Lord cauſed medicines to grow; and he that is wiſe will not deſpiſe them; for with ſuch doth he heal men, and taketh away their pains.* Eccl. xxxviii. 4, 7.

Since by his fall, man became ſubject to the elements, from them he receives the conſtitution of his body; but his reaſoning intellect, and ſpiritual ſoul, are derived from the pure eſſence or tincture of the Deity, originally infuſed into the ſeed of man. To the violence and impurity of the elements, we owe the diſorders of the body; to the temptations and allurements of

of Satan, we juſtly impute the diſeaſes of the ſoul. Yet by due attention to our reaſoning faculty, it is no hard taſk to preſerve health, or prolong life, to the term of its *natural* diſſolution; whilſt by the powers of the mind and the light of the goſpel, we may ſtill avoid the poiſon of ſin, and become members of that eternal kingdom, which is the ſure reward of the good and virtuous.

The imperfections and diſeaſes of the body therefore, beginning with Adam, are in conſequence tranſmitted to his poſterity; and may be divided into *hereditary*, and *accidental*. Hereditary complaints proceed from a certain defect of the animal powers, or imperfect ſtate of the ſanguiferous ſyſtem, at the time of copulation. The accidental, conſiſt of all ſuch maladies as are communicated by the diſcordant or putrid ſtate of the elements, not only during the time the child is encompaſſed in the womb, but from its birth, to the lateſt hour of its exiſtence. And it might here be obſerved, that the increaſe or decreaſe of both hereditary and accidental diſeaſes, depend almoſt entirely on the *purity* or *impurity* of the blood. For if pure, in both male and female, at the time of copulation, the fœtus will be naturally ſtrong and healthful. So likewiſe, if after parturition, and during life, care be taken to keep the blood in an uncontaminated and elaſtic ſtate, we ſhall not only avoid the common effects of exceſſive cold, heat, and moiſture, but eſcape that direful train of acute diſeaſes, communicated by putridity and infection; or, ſhould they by chance attack us, the

the effect becomes ſlight and temporary. A circumſtance this, which ſurely ought to weigh perpetually on the minds of thoſe, who know how to value the bleſſing of health, or who would wiſh to live a long, an active, and a pleaſant, life. This is therefore a ſpeculation of ſuch high importance, that I ſhall now proceed to ſhew how hereditary complaints are communicated in the act of copulation—how increaſed and foſtered in the womb—how accidental diſeaſes grow up and follow, and how both theſe enemies to the health and happineſs of mankind may be prevented or overcome.

In that union of the ſexes to which we are inſtinctively impelled, or rather, in the union of thoſe eſſences or tinctures peculiar to the generative organs of the male and female, by the contact of which the firſt moments of human exiſtence commence, the moſt whimſical and abſurd theories have been ſet up. No branch of phyſiology has been more expoſed to cenſure and miſtake. While the phenomena of the heavens, of the earth, and even of the human mind itſelf, are traced with a ſteady hand, and with all the dignity of philoſophy, the functions of the human body, in health as well as under diſeaſe, though expounded with a profuſion of fantaſtical erudition, appear almoſt in as much doubt and darkneſs as in the days of Paracelſus.

Let us then endeavour to remove the cloud, and review the mode by which generation is really accompliſhed. I have in my Key to Phyſic explained the Syſtems of Buffon and of Lewenhoek, in their ſpeculations on the animalculæ found in the ſeed of man,

by

by the means of which they imagined conception, and the reproduction of the human ſpecies, abſolutely to take place. I ſhall here, however, conſider it in a new light, both as it concerns the propagation of the body and of family-temper, likeneſs, and diſeaſe; but as the female organ is ſo materially concerned in this myſterious act, and hence requires a very minute inveſtigation, I ſhall with that view adopt the reaſoning of a late ingenious author, whoſe opinion of the action and powers of the female generative parts, exactly coincides with my own.

The extremity of the uterine ſyſtem, without the nymphæ, ſeems not, except from its aperture and the laſcivious ſuſceptibility of its texture, materially requiſite to generation. Immediately within the nymphæ, the *vagina*, or great canal of the uterus, begins. Before coition has diſturbed its proportion, it is generally about five or ſix inches long; and when thrown into a circular form, without violent diſtention, its diameter is about a ſixth part of its length. But as, in coition, the vagina is the immediate receptacle of the male organ, it is capable of great diſtention, and may be rendered of very conſiderable capacity. In general, however, after frequent contact, this canal becomes much ſhorter, but more proportionably increaſed in its diameter; yet being contrived by its organization for the purpoſe of exciting titillation and pleaſure, it can and does accommodate itſelf to whatever ſize is neceſſary cloſely to embrace the male organ in the act of copulation.

At

At the upper extremity of this canal, the uterus or womb is ſeated. It is of a pyramidal form, with its apex towards the vagina. Its greateſt length, in virgins, is not more than two or three inches; and its width is ſcarcely one; its internal cavity muſt therefore be very ſmall. It is connected to the vagina or great canal by a paſſage ſo ſmall, that a bodkin or ſtilet cannot be introduced without much difficulty. In the broad or upper extremity of the womb, the ovaria are ſeated. Their ſubſtance is ſpongy, and they contain an indefinite number of veſicles of a duſkiſh ſemitranſparent quality, the involucra of which are diſtinct, and ſimilar to the general ſubſtance of the ovaria. Theſe veſicles are the ova or eggs, which contain the rudiments of the fœtus, and which muſt abſolutely be impregnated with the male ſeed, before it can be poſſible for conception to take place.

Now it has been, and ſtill is, the common opinion, that when venereal embraces occur, the whole genital ſyſtem of the male being thrown into action by libidinous deſire and violent friction, by this exertion the ſemen is thrown with conſiderable vehemence from the penis, and is either forced through the mouth of the womb, and attracted by the ovaria; or, that it is received by the Fallopian tubes, and conveyed by them through a variety of convolutions, till by their fimbriæ they are conducted to the ovaria, in the manner I have already fully deſcribed in the Medical Part of my Family Phyſician; all which tedious and complicated proceſs is alleged to take place in the *inſtant* of coition.

Others

Others again ſuppoſe, that the internal orifice of the womb becomes open and perviousduring the exertion and enjoyment of copulation, and that the glans of the penis abſolutely paſs into the cavity of the womb, and eject the ſeed immediately upon the ovaria. To each of theſe theories there appear inſuperable objections. In refutation of the firſt, we need only obſerve, that the vagina, from its ſtructure, and from its organization in the act of venery, is diſpoſed ſtrongly, and in every part, to embrace the penis; and as the glans muſt thereby be cloſely ſurrounded, although it reaches not in every perſon to the furtheſt limits of the vagina, the ſlight and momentary impetus of the ſemen will thus be very effectually reſiſted; if not totally ſubdued. If the penis be not of magnitude ſufficient to occupy the vagina to its full extent, the unoccupied ſpace muſt be ſomehow diſtended; and, let this vacuum be what it will, its reſiſtance muſt be effectual; and, if it be not diſtended, the power or preſſure which occaſions its collapſe will over-balance the impetus of the ſemen. But ſuppoſing the virile member in all caſes to be ſo exactly proportioned as to occupy the whole length of the uterine canal, which however we know is not the caſe, yet from what principle ſhall we aſcertain that the ſeminal tube of the penis, and the apex of the womb, ſhall be made ſo exactly to correſpond as to become continuous? The ſemen, in the event of coition, is doubtleſsly thrown out by the penis with ſome force, though this force will always depend upon the vigour of the male organs, and therefore muſt vary from the

loweſt to the higheſt degree of vigour of which thoſe organs can be ſuſceptible. But even allowing the glans penis and apex of the womb to fall into exact contact upon due penetration, and that the male ſeed is always ejected with conſiderable force from the penis, and the vagina to be no barrier to the progreſs of it, yet how is it to force its way into the cavity of the womb? The aperture which leads from the vagina or great canal into the womb, is in fact no aperture at all. During menſtruation, indeed, it is pervious; but even then it is only capable of admitting a very ſmall probe; and this is no argument that it is naturally, and at other times, pervious. How often too has this aperture been entirely blocked up by preternatural obſtructions, and conception nevertheleſs taken place? Inſtances of this have often occurred; and the preciſion and authority withwhich they are recorded by different practitioners, leave no room to evade the argument. Hence this mode of impregnation appears not only highly objectionable, but utterly impoſſible; having no correſpondence with the human ſtructure, or with the economy of Nature.

After what has been ſaid, it may appear idle to proſecute any further refutation of the progreſs of the male ſeed by the Fallopian tubes, or through the mouth of the womb. But as authors of the greateſt reſpectability have believed in its progreſs through the tubes, and tell us they have even ſeen it there, it may not be improper to enquire how far this is aſcertainable. The Fallopian tubes, through which the ſemen is ſaid

to

to paſs, originate, by very minute perforations, through the fundus of the womb; and, increaſing rapidly in their diameters, their capacities, when dilated, may be about the third part of an inch where they approach the ovaria. Here, again, they ſuddenly contract, leaving only a ſmall opening; while their main ſubſtance is ſtill continued, and is expanded into that plated or jagged fringe called the fimbriæ, which is contiguous to the ovaria*. I ſhall now aſk, by what law in nature, by what effort of it, is the male ſemen to be conducted through this conical and convoluted canal? Can the ſemen now poſſeſs any active force, to introduce itſelf through the rigid perforations of this organ, and to overcome the collapſe of the tubes? The ſtimulating power of the ſemen muſt ſoon be loſt in a veſſel which it has not power to diſtend; and we cannot ſuppoſe it capable of acting in a direction completely oppoſite to what is the acknowledged office of the tubes. It muſt be by irritability that the ovum is conveyed into the uterus from the ovaria; and we know no veſſels in any part of the body whoſe action is double and contrary. This ſyſtem therefore favours of great improbability. But we are told by ſome, that they have actually ſeen the male ſemen in its unalterated ſtate, lodged in the Fallopian tubes. Theſe ſagacious authors might as prudently have affirmed, that they had ſeen ſnow upon the canal in Hyde-park at Midſummer. They did not

* See the Medical Part of my Engliſh Phyſician, page 17, 89, 97, &c. where all the parts, both male and female, are anatomically deſcribed.

know, or did not chooſe to recollect, becauſe it made againſt a pre-conceived opinion, that the human ſeed, when ſubjected to heat, eſpecially to ſuch a moiſt and natural heat as thoſe parts conſtantly afford, ſoon loſes its ſpiſſitude and tenacity, and becomes very ſubtilly fluid, and almoſt colourless. Beſides, it is univerſally acknowledged, that a conſiderable part of the ſemen is almoſt always, immediately after coition, rejected by the female. When we attend to the many inſtances of credulity and impoſition in the theories of generation, we need not marvel at the aptitute and facility with which pretended diſcoveries creep into notice, and the ſolemnity with which they obtrude themſelves into ſyſtems.

All the foregoing arguments againſt the poſſibility of a pervious communication between the vagina and the uterus, are alſo concluſive againſt the ſuggeſtion, that the penis in the act of coition penetrates into the cavity of the womb. Nor is the aſſertion of thoſe who contend that this orifice, by the turgidity of the parts during coition, naturally opens and dilates itſelf to receive the male ſeed, marked with the leaſt degree of probability. How is this dilatation of the orifice to be effected? Though the whole uterine ſyſtem, during the venereal act, be rendered ſtiff and turgid by animal deſire and influent blood, yet it is more probable that this turgidity would rather compreſs than dilate the orifice; and the ſtructure and texture of the womb ſeem exceedingly unfavourable to ſudden dilation by any means whatever. In an unimpregnated

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or virgin ſtate, the womb is ſo ſmall that its ſides coaleſce or adhere together, and it has no hollow appearance whatever; though, from the texture and elaſticity of its fabric, it may be thrown into a globular form, which will conſtitute a cavity. But in coition, with all its occult and uncommon phenomena, what charm have we left to overcome this coaleſcence, and form this cavity, by opening or ſeparating the membranous ſides of the womb? Will it here be ſaid, that the forcible ejection of the male ſemen will effect this purpoſe, or that the ſtiff and turgid ſtate of the penis itſelf will force its way into a fabric ſo remote and delicate? Though females may entertain ſanguine ideas of theſe things, we muſt ſuppoſe that the vigilant anatomiſt, toiling through the unalarming and chilly organs of the dead, ought to furniſh a more rational hypotheſis, whence to deduce the active principle and admirable proceſs of the human impregnation.

Authors have been always eager to eſtabliſh the certainty of a conſiderable afflux of blood to the female organs, and conſequent turgidity during the voluptuous communication of the ſexes; and this has been a wonderful prop to many abſurd conjectures. This afflux, and conſequent turgidity, they ſuppoſe originates, like the erection of the penis, from the ſtrength of libidinous ideas, and other locally irritating cauſes; and is intended by nature to induce a tenſion in the female organs, that the progreſs of the ſemen may thereby be facilitated. This tenſion, again, they ſuppoſe induces ſome kind of conſtriction, which is

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faid to fupport the action of the different parts of the genital fyftem, but particularly of the Fallopian tubes. Thefe tubes, it is faid, are remarkably diftended, during coition, by the blood rufhing into the numerous veffels which creep between their coats, by which means they are erected, and their fimbriated terminations applied to the ovaria: and it is gravely added, that diffections of gravid women, and the comparative anatomy of brutes, corroborate the opinion. Were it not for the ferious refpect with which this anatomical obfervation hath for a length of time been favoured, no body furely would be at the pains of detecting the abfurdity. Allowing that this turgidity, with all its concomitant circumftances, really happens in the *living* fubject, how can it poffibly exift in a carcafe flaccid with death, and, as is always the cafe in a human anatomized body, where death muft have taken place fome conficerable time before?

But this turgidity, though it fometimes may happen, and yet in a degree very limited to what is alleged, does not always occur; and, when it really does take place, it feems rather to be the companion and promoter of libidinous gratification, than a principal and effential promoter of conception. To many women the embraces of the male are extremely, if not completely, indifferent; and to fome they are abfolutely difagreeable; yet even thefe women are prolific. There is no difficulty in fuggefting a very fufficient and natural reafon why the parts of the female, directly fubjected to the action of the penis during the venereal congrefs,

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ſhould become turgid with influent blood, and ſometimes be conſtricted. Nature, though ſhe ſeems in general unfriendly to exceſſive luſt, yet ſometimes permits it; and theſe are the means ſhe ſeems to have appointed for heightening it. Beſides, it is proper that the animal inſtinct, which prompts the reproduction of the ſpecies, ſhould not be diſappointed in its gratification, however brutal theſe ſenſations and ideas may appear to the purified philoſopher. Theſe means, then, however they may contribute to the mutual ſenſibility of the ſexes, in the voluptuous gratification of animal pleaſure, appear to have no real influence on the proceſs of generation, after the venereal congreſs has ceaſed; nay, we have reaſon to believe that their action or influence does not extend beyond the limits of the vagina, except in common with the reſt of the genital ſyſtem, even during that congreſs. If an afflux of blood to theſe parts were always to be attended with theſe effects, what violence muſt the ovaria be expoſed to by reiterated coition, and by every return of the menſtrual diſcharge! During the menſtrual afflux, a very conſiderable diſtenſion muſt ſurely take place over the greateſt part, if not the whole, of the genital ſyſtem; and, as this turgidity is the principal reaſon aſſigned for the action of the tubes, by what means are the fimbriæ diverted from exerciſing thoſe functions which turgidity, though from another cauſe, at another time ſo ſucceſsfully inſtigates? Alſo how happens it that grateful copulation is not always productive, and the contrary? that the fimbriæ, in every venereal act,

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do not operate upon the ovaria, and thereby produce more fœtuſes, or a waſte of the ova? and that the organs themſelves are not incapacitated, or diminiſhed in their energy, by ſuch repeated exertions? We have every reaſon then to conclude, that the tenſion and conſtriction of the female organs, induced by the afflux of blood during coition, if of conſequence, are intended ſolely to promote animal gratification; and that they have no direct influence on the actual progreſs of the ſemen through the above-deſcribed communications to the ovaria.

Upon the whole, it is certainly no way equivocal, that the ſemen cannot, in any manner, be applied to the ovaria by means of the fimbriæ; that it cannot aſcend or advance through the convolutions of the Fallopian tubes; that it cannot divaricate and traverſe the compreſſed uterus; and that it cannot even operate a paſſage through the rigid bulwark of the cervix uteri. The probability of the progreſs of the *aura ſeminalis* through the ſame paths is deſtroyed by the ſame arguments; and the whimſical opinions founded on the preſence of animalcules in the ſemen, and on the organic bodies furniſhed by the ſemen of both ſexes, and uniting in the uterus, as far as this alleged aperture is concerned, muſt ſtand or fall by the ſame fate. It may ſeem however ſtrange, that a doctrine ſo ancient, and ſo univerſally believed, ſhould be ſo eaſily overthrown; and it may furniſh to the ſpeculative reader, unfavourable ideas of the preſent ſtate of medical literature. He may indeed wonder, that, though every

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ſcience has become rational and reſpectable by the exertions of their cultivators, medicine alone has been able to reſiſt the diligence of a thouſand years; although it has been wreſted from the hands of nurſes, and its profeſſion become dignified and lucrative, it can ſcarcely be ſaid, at this day, to afford one unqueſtionable idea. In the volumes of phyſiology, compiled by the moſt learned phyſicians, and drawn from the moſt learned ſources, will the unconcerned philoſopher find the dogmata of medicine conſiſtent with nature, or with common ſenſe?

But ſince the ſemen, in ſome ſhape or other, contains that animating principle which is indiſpenſibly neceſſary to generation; and ſince the ovaria as indiſputably produce ſomething from whence a living creature is to be evolved, it becomes demonſtrably clear, that the influence of the male ſeed muſt be powerfully incorporated with the female, and directed to the ovaria before this effect can poſſibly take place. We have already ſeen how this cannot happen; let us now endeavour to point out a rational medium by which it may be accompliſhed. For this purpoſe we muſt again return to the vagina, or canal of the uterus, as being the principal organ on the part of the female which actually contributes to propagation; and without the full and complete uſe of which, impregnation cannot take place. It therefore demands a very minute and attentive inveſtigation.

The vagina is elaſtic, and ſomewhat membranous, compoſed of muſcular fibres, blood-veſſels, nerves, and

lymphatics. It commences, from beneath, at the nymphæ, and, riſing obliquely about five inches, is loſt upon the uterus. Its capacity is very different in different ſubjects, and in no very diſtant periods of life in the ſame ſubject. A very reſpectable anatomiſt finiſhes his deſcription of it by ſaying, it is "*membro virili ſecundum omnes dimenſiones accommodabilis.*" Its inner membrane, though very uneven, is delicately ſmooth, and, from its nervous texture, exquiſitely ſenſible; the outer membrane is more ſpongy and muſcular; and, the whole body of the canal is very plentifully ſupplied with blood-veſſels, nerves, and lymphatics. We know little more of the lymphatics of theſe parts, than that they are more numerous proportionally than in any other part of the body. Thoſe which originate in the exterior parts of the female genital ſyſtem, traverſe the inguinal glands, while the deep-ſeated ones take a much more direct courſe to their place of union with the lacteals: but with theſe we ſhall be more particular, when we adduce our obſervations in favour of a very powerful abſorption ſubſiſting in the vagina.

The entrance into the canal of the uterus from without is guarded by the nymphæ, which form an eminence on each ſide, ſo peculiarly conſtructed and arranged, that we muſt think lightly of the phyſiologiſt who could ſuppoſe them to be only appendages in office to the urethra. Indeed, as nature frequently operates more than one end by a particular ſtructure, we ſhall not pretend to limit the ſecondary or inferior offices which the nymphæ may promote; but we ſee much

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reaſon to believe them created to aſſiſt powerfully in preventing the ſpeedy eſcape of the male ſemen, and thereby expoſing it longer to the action of the abſorbent ſyſtem. A multitude of circumſtances corroborate this belief; and it will not be impaired by the allegation, that theſe ridges by no means conſtitute a regular and complete valve. Immediately within this barrier, a ſtructure, on the ſame principles as thoſe of the nymphæ, but more elegant and powerful, commences; and it is continued over the ſurface of the vagina, gradually growing finer, till it is loſt in ſmoothneſs near the upper extremity of the canal. This ſtructure is the rugæ of the vagina, ſo accurately drawn and deſcribed by Haller and others; but degraded by ſome anatomiſts, who mark it only as uſeful in exciting venereal enjoyment, or admitting expanſion during coition and parturition. It is inſinuating a mean and diſgraceful reflection on the important order and operations of nature to ſuppoſe, that theſe rugæ, which are not caſually arranged, but are regulated with as much preciſion and uniformity as we can trace in any other part of the genital ſyſtem; I ſay it is nugatory and preſumptuous to aſſert, that this intricate, extenſive, and beautiful, arrangement, has been ſo minutely laboured for no other purpoſe, but merely to excite a greater titillation during the groſs and libidinous commerce of the ſexes, and a greater extenſion during parturition. This ſtructure may indeed promote ſecondary purpoſes; but it is intended for much nobler ends. Had theſe rugæ been conſtructed merely for ſimple contraction and dilatation,

they would have covered equally the whole ſurface of the vagina, which certainly does not happen; neither, if theſe had been their principal uſes, would they be ſo ſoon and ſo eaſily obliterated. We believe, then, that the rugæ of the vagina are thus contrived principally to protract the ſemen in that viſcus, after the penis is withdrawn, and thereby to favour abſorption; eſpecially as the qualities of the ſemen coincide wonderfully with theſe intentions.

The ſemen, as it is ſecreted from the blood in the teſticle, is very different from that heterogeneous mixture which is expelled by the urethra in coition; though, by the alteration, its fecundating quality is not improved. When it is conveyed into the veſicles it is of a thin conſiſtence, of a pale yellowiſh colour, and little in quantity. In theſe veſſels it is ſomewhat inſpiſſated, and its colour heightened; and, after it is mixed with the liquor of the proſtrate glands, it becomes ſtill thicker, and of a more whitiſh colour. This conſiſtence, which the ſemen acquires in its progreſs from the teſticles, may produce other ſlight properties; but the principal intention of it ſeems to be, to correſpond more effectually with the abſorbent power of the vagina: for thus, by the increaſed tenacity of the ſemen, the remora of its fecundating part muſt be protracted in the vagina, while at the ſame time the abſorbents are allowed more time to attach thoſe active ſubtle parts intended to be carried into the circulating ſyſtem. We may add here, in order farther to confirm the opinion concerning the uſe of the tenacity of the ſemen,

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that when too little of this mucilage is derived from the glans, or when it is of a depraved or thin quality, the whole mixture eſcapes the machinery of the vagina too rapidly, and hence coition becomes unproductive. This is the ſeminal ferociſty, as it is called, held to be one of the few cauſes of ſterility in man. And we may add farther, that when the conſent and power of procreation begin to fail on the part of the woman, the crenulations of the vagina are then always viſibly decayed, whether affected by the advances of age, or by imprudently-reiterated venery. But what are we to think of a very reſpectable author, who gravely tells us, that the ſemen, by ſtagnation, and by the addition of the cream-like liquor of the proſtrate glands, is better ſuited to the projecting effort of the urethra in the event of coition? Indeed, it is not to be denied, that the increaſe in quantity of the ſeminal mixture may enable the projectile power of the urethra, with its aiding muſcles, to act with greater efficacy; but a boy would laugh in my face were I to tell him, that by adding to the weight and tenacity of water, his ſquirt would throw it much farther. To act in concert, then, with theſe unqueſtionable qualities of the ſemen, the ſurface of the vagina, by means of its rugæ, from their elevation and arrangement, muſt have a very conſiderable effect in heightening the remora we have deſcribed. No doubt, if nature only had in view the prevention of the regreſs of the ſemen, we might have met with a much ſimpler mechaniſm; but as to this part very different offices, and all of them material, were allotted,

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it has been intricately qualified for them all. Thus, upon the whole, we ſee an admirable diſpoſition in the ſemen, and in the ſurface of the vagina, to facilitate, and promote the action of the abſorbent veſſels.

Though the abſorbent ſyſtem has not been traced with the ſame minuteneſs and ſucceſs which have followed the inveſtigation of the ſanguiferous ſyſtem, it is however known to be very general, and very powerful, and it is remarkably ſo in the cavity of the pelvis. How, otherwiſe, is that effuſion which is conſtantly going on, in order to lubricate the whole genital ſyſtem in the female,and to prevent the coaleſcence or concretion of its ſides, reſumed ? In thoſe unfortunate females whoſe menſes have taken place, but in whom likewiſe the expulſion of them has been prevented by the unruptured hymen, or by unnatural membranes blocking up the paſſage, much of the blood has always been reſorbed ; and in thoſewhere thediſeaſe hasexiſted long, and where the thick parts of the blood have begun to be broken down, the colluvies has been reſorbed, and a train of ſymptoms induced, not to be accounted for by the mere turgidity which this obſtruction occaſioned. The infection and progreſs of ſyphilis, or confirmed lues, not only eſtabliſh the certainty of a very rapid and powerful abſorption in the vagina, but alſo exhibit the power and influence of the irregularities of its ſurface. It is ſurely very evident, that the chief application of the venereal virus, whether in gonorrhœa or ſyphilis, but eſpecially in gonorrhœa, muſt be near the farther extremity of the vagina,

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though there can be no doubt but the ulcerated glans may often affect the exterior parts by its introduction; but in a confirmed lues, the fundus of the vagina is rarely the seat of ulcer, and it is never affected in gonorrhœa. Here, the surface of the vagina being mostly smooth, the poison runs downwards, till, falling upon the rugæ, it is there intercepted and retarded. Here then the poison is multiplied, and leisurely applied to the mouths of the lymphatics, through which it is carried into the blood; where assimilating together, it contaminates the whole mass. Though the progress of the syphilitic poison is not always thus regular, the variations do not affect this opinion. When the lymphatics, and their glands, are vigorous and easily permeable; when the application of the venereal virus is within the nymphæ; and when it is sufficiently active; the first symptoms of disease arise from general contamination; and were this poison always very mild, and taken up by the absorbents within the nymphæ, there is no doubt but the whole mass would almost always be diseased, without much chance of ulcer or preceding bubo. But there are many circumstances which tend to retard the speedy absorption of syphilitic virus, even when it is extremely active; and, among these, the inflammation which in general it must induce, is not perhaps the least considerable; but these cannot affect the absorption of the seminal fluid of the male. The syphilitic virus too, may, from the laxity and lubricity of the vagina, (a circumstance very general in immodest women,) not only escape absorption, but may be carried

ried outwards, to exerciſe its energy on the external parts. And it is from theſe reaſons partly, that immodeſt women are ſo little diſpoſed to conception, and that modeſt women, when ſubjected to venereal infection, generally experience the more latent and violent ſpecies of this diſeaſe. And as a greater ſurface of abſorbents is expoſed in the female to the contaminating influence of the diſeaſed male organs, and as the greateſt part of the female genital ſyſtem has a much readier intercourſe with the blood than through the inguinal glands, we meet with this ſpecies of ſyphilis much oftener in women than in men. The cure of ſyphilis, too, by ſpecific remedies introduced into the vagina, fully demonſtrates the ſtrength and activity of the lymphatics in this canal. Is there then a ready and eſtabliſhed communication, for diſeaſe and for its remedies, between the vagina and the genital circulating ſyſtem of the blood, while a mild fluid, yet poſſeſſed of activity infinitely beyond that of any poiſon, and created for the higheſt and beſt of purpoſes, is not permitted to traverſe the ſame channels? Many other corroborating circumſtances, both in fact and in analogy, might be adduced here, were not theſe arguments in themſelves concluſive.

In a due ſtate of health there is what may be called an inteſtine motion in the blood, occaſioning and promoting its commixture, as well as its ſeparation. In all general diſeaſes, and even in many which are called local, this inteſtine commotion is heightened, diminiſhed, or deranged; and in the exanthematous or eruptive diſorders,

diſorders, it muſt be remarkably ſo. In ſyphilis, though this diſeaſe is not directly exanthematous, there muſt be exceſſive diſturbance, and certain depravation prevailing throughout the whole ſyſtem, before ſuch complete deſtruction can be brought upon it. In theſe caſes of diſeaſe—where vehement infection, with its fatal conſequences, is overturning all before it, we have always found that milder infections could make no impreſſion. Hence the practitioner never heſitates to ingraft the ſmall-pox, though the patient may have already received the diſeaſe, either by natural contagion or by prior inoculation: hence a milder diſeaſe is often removed by a ſeverer one; hence how conſumption is always retarded, and often overcome, by fecundation; and hence fecundation itſelf, as the feebler ſtimulus, is often prevented by the anticipating diſturbance of ſyphilis, or of ſimilar diſeaſes vehemently preoccupying the circulating ſyſtem. It is this anticipation, this prior poſſeſſion, and change in the circulating blood, which reaſonably and emphatically accounts for the want of influence in the human ſemen upon the female after impregnation has fully taken place, or while the mother is providing milk. And we might account for the production of twins, triplets, and thoſe rare inſtances of more numerous progeny, from the ſame circumſtances. One, two, or more, ova may indeed be ſo ripe as to meet completely the fecundating impulſe of the male ſemen at one time; and it is perhaps more ſtrange that the different fœtuſes ſhould be maturated and expelled about the ſame time, than if a

greater period intervened between the expulſion of each; and might not a ſecond intercourſe of the ſexes be ſucceſsful, when the female circulating maſs was not fully pre-occupied by the influence of the firſt? But the extent and influence of prior infection, or impregnation of the blood, has been better obſerved in the venereal, than in any other diſeaſe, or natural occurrence. Women whoſe general ſyſtem is vitiated by the ſyphilitic virus, are always incapable of conception; or if the vitiation is not complete, but in a ſlight degree, an imperfect fecundation may take place; but its product fails not to demonſtrate the want of energy, and the unqualified ſtate of the mother, from whence it drew its principle arrangement. Theſe ideas are corroborated by the mode of cure adopted in the circumſtances we have been deſcribing, and by the general effects of it.

Thus we have endeavoured, and we hope with ſucceſs, to eſtabliſh the truth of a ſtrong power of abſorption in the genital ſyſtem of the female, originating in the vagina; and a diſpoſition in the whole maſs of blood, to be affected according to the properties of what may be mingled with it. And as, from the preſent ſtate of anatomical knowledge, we have no right to ſuſpect any other mode than this of abſorption, by which the unrejected and finer parts of the ſemen can in any ſhape, and with any effect, be determined towards the ovaria, let us ſee how this can be farther aſcertained by what we may ſuppoſe to be

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the effect of the abſorbed ſemen, and the future appearances of impregnation.

In human creatures the evolution of all their parts is gradual, and the work of time. From the moment in which the ovarian nucleus receives the vivifying impulſe from the ſemen, till the period of puberty; from the dawn of its exiſtence, to the completion of its figure and its powers; its alterations are ſo many and ſo varied, that our idea of the germ is not recogniſable in that of the infant, and our idea of the infant again is loſt in that of the perfect animal. A gelatinous particle, without neceſſary form and texture, becomes a ſtupendous fabric, ſo intricate and elaborate, though at the ſame time perfect and complete, that human ingenuity and reaſon have toiled almoſt fruitleſsly for thouſands of years in inveſtigating the progreſs. It has indeed been averred by ſome, that all the different organs of the animal in its complete ſtate are original and diſtinct in the embryo, and are only unfolded and rendered more evident by its increaſe. This ſurely is not the caſe. The animal is certainly endowed with the power of completing itſelf; and can, from inorganized parts, produce an organized ſtructure. The parts are only evolved and perfected as they become uſeful in the different ſtages; and the evolution of many of them can be prevented without the deſtruction of life, or exceſſive prejudice to thoſe already evolved. If the different organs or rather principles are at firſt perfect, why are thoſe effects which depend upon them not perfect alſo? Why is the ſtate of infancy a ſtate of idiot-

iſm? why is the temper of youth capricious and flexible? and why are the temper and paſſions of the adult but barely diſcernible in the preceding ſtages?

As we are of opinion then, that the different organs are matured only as they become requiſite and neceſſary; conſequently, we believe the evolution of the generative organs in both ſexes muſt be among the laſt efforts of the increaſe and completion of the body. This evolution could not have taken place earlier. If it had, the mind muſt have been affected by theſe impulſes which announce the maturation of theſe organs, by which we know the mind, body, and ſoul, are connected. In the male, the foundation and powers of maturation, of that ſtrength, and of thoſe more rational qualities which belong to him, are laid to ripen with puberty; hence communication with the female, before theſe are finally arranged and ſecured, proves inefficient, and entails upon him debility both of body and mind. The ſame thing holds, as far as the ſame ends are concerned, with reſpect to the female; and we cannot ſuppoſe that nature could be ſo idly eccentric, as to puniſh the female with a diſpoſition or propenſity to procreate, before the body was capable of undergoing the various diſorders and dangers of pregnancy and parturition. For the ſame reaſons, none of the ordinary organs of ſenſe are qualified to receive or communicate diſtinct impreſſions, till the brain, the ſeat of the ſoul, as the heart is of life, has acquired thoſe properties which muſt fit it for its arduous offices. It is only when the different organs of ſenſe have been completely

completely evolved, and all their parts found and juſt, that the power of the mind is effectuated and eſtabliſhed. This faculty, though it ſeems eſſentially different from reaſon, is no doubt the origin of it; for the extenſion of common ſenſe, from memory, or rather from compariſon, and what may be called the balance of the ſenſes, conſtitutes what is called reaſon and judgment. While the organs are incomplete, from infancy or from diſeaſe, their communication with the underſtanding is alſo incomplete. Thoſe who have been born blind, or whoſe eyes have been deſtroyed in infancy, before they were become uſeful, have none of thoſe ideas which depend upon the eye; it is the ſame with the deaf, and in all caſes of ideas depending upon one ſenſe: and we may add, the early caſtrated have no comprehenſion of, or propenſity to, the gratifications of love. Do not theſe things ſhow—and a thouſand other circumſtances might be adduced to ſtrengthen the proof—that the mind acquires its powers only as the parts of the body are unfolded and confirmed; that the body is perfected only as the mind is qualified to receive its impreſſions; and that the parts of the body are perfected by one another?

During infancy and youth, ſtrictly, the ovaria are ſimple inorganic maſſes, partaking of no more life than is barely ſufficient to ſuſtain them, and connect them with that energy and progreſs of conſtitution which are afterwards to unfold all their properties. At the period of puberty, thus denominated from the change which takes place in the genital ſyſtem at that time of life, this progreſs and developement of the

ovaria

ovaria are finiſhed by nature; and theſe bodies are generated, and completed within them, which will exiſt without impregnation by the male, but which this impregnation alone can finally maturate and evolve. That theſe bodies are not generated at an earlier date, anatomy as well as reaſon, founded on the foregoing arguments, aſſure us; and that the ova of all the fœtuſes which the female is afterwards to produce, are generated at that time, ſeems equally certain.

Though this change in the ovaria is the moſt eſſential, the whole genital ſyſtem alſo undergoes a very material change. The ſimple alterations of ſtructure and dimenſions in the different parts of this ſyſtem, though they are neceſſary and ſubſervient to generation and parturition, yet they are not ſo material, either in themſelves or to our purpoſe, as to require a minute deſcription. This, however, is not the caſe with reſpect to the menſes. It is chiefly with a view to the nutrition of the fœtus that this extra-ſanguification in the female is provided by nature; which is determined to the genital ſyſtem in the ſame manner as the other fluids are determined to other outlets; but, as the continued drilling off of this extra blood would be exceedingly inconvenient and diſguſting, nature has prepared, as it were, a ciſtern for its reception. What may be ſufficient to bring on the hæmorrhage, however, is only accumulated; and the general redundancy, induced by the obſtruction and accumulation, ſubſides gradually as the hæmorrhage goes on. This is the manner of menſtruation in the unimpregnated

unimpregnated female, and theſe are the reaſons why it aſſumes a periodical form. In the impregnated female again, the preparation of extra blood ſtill continues, but its conſumption becomes very different. By the extenſion of the uterus, and by the waſte occaſioned by the nouriſhment of the fœtus and its involucra, the ſurcharge or extra preparation of blood is nearly balanced, or is taken up as it is prepared; and hence the periodical efforts are almoſt loſt. In the firſt months of pregnancy, however, the uterine ſyſtem is not always able to conſume the ſurcharge of blood, and thereby take off the periodical effort; and hence it is that the loſs of the fœtus happens moſt generally in the early months, and at the uſual period of the menſes, unleſs ſome accident has ſupervened. And it is nearly from the ſame reaſons that miſcarriage is ſo often to be apprehended in the latter months of pregnancy, and that the fœtus is afterwards expelled from the womb. When the fœtus has acquired all that bulk and ſtrength which the capacity and powers of the uterus can confer, and when a change of circulation and mode of life becomes neceſſary to it, the uterus and fœtus become plethoric; a general accumulation ſucceeds; and the periodical efforts of the menſes return. During the middle months of pregnancy the fœtus is in a ſtate of rapid growth, and is capable of conſuming all the blood which the mother can furniſh; but there is neither room nor waſte, in the latter months, for the blood which the mother is conſtantly pouring in; and hence ariſes that plethora, both in mother and child, which is

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to inſtigate the effort to parturition, which occaſions the effuſion after parturition, and which is to ſupply the extended circulation of the born child.

But beſides the utility of menſtruation to the fœtus, there is a very evident connection between it and impregnation. To ſpeak of it as a proof of the ripened qualifications of the female, is to ſay nothing; its immediate action is eſſential to conception. In the human female, it is well known, that coition is almoſt only ſucceſsful immediately after this evacuation has ſubſided. Who will reconcile this—and it is no modern and groundleſs obſervation—to the conſequence which has been aſcribed to turgidity and tenſion, which we have already adverted to? Almoſt every woman who has frequently undergone pregnancy, and who has attended judiciouſly to the phænomena of that ſituation, calculates from the laſt ceſſation of the menſes. At this time, or rather very ſoon after, the plethoric tumult of the genital ſyſtem is completely ſubſided, and the abſorbed ſemen gets quiet and unanticipated poſſeſſion of the circulating blood; and at the ſame time the gradually-returning plethora promotes its action, and perhaps its determination to the ovaria. When the menſes are interrupted, or profuſe and frequent, impregnation ſeldom takes place; and it admits not of a doubt, that when the determination of this blood is towards the mammæ, in the form of milk, coition is unſucceſsful: and as ſoon as its determination to the uterine ſyſtem is reſtored, other things being favourable, copulation ſucceeds. We may add as a known fact, that continuing

nuing to give ſuck after the uſual period, will occupy the plethora, and prevent its determination, in the form of blood, to the uterine ſyſtem. It is an additional reproach to the groſſneſs of human nature, that this practice hath too often been put in execution, in order to obviate conception. Sometimes there is reaſon to believe, that conception has taken place while the plethoric determination to the breaſts continued. I am rather diſpoſed to believe, that in ſuch caſes its return to the uterine ſyſtem was recommenced; for about the ſame time the milk generally loſes its alimentary qualities, and gradually dwindles away.

But we have ſaid enough to deſcribe and ſubſtantiate thoſe parts of the female, which puberty has prepared for generation. We ſhall now conſider its operation on the male. It need not be repeated, that the ſeminal fluid is an exceedingly penetrating and active fluid. Its effects, after it is generated, even upon the male, demonſtrate its activity and influence, far beyond the precincts wherein we believe it to be accumulated. After puberty, the ſecretion of it, during even indifferent health, is continually going on; and thoſe collections of it in its reſervoirs, which are not thrown out by venereal exerciſe, or by other means leſs decent, are reſorbed and mingled with the general maſs. What is actually reſorbed about the period of puberty, before the ſyſtem has been habituated to it, or ſaturated with it, produces very curious and remarkable effects over the whole body. The fleſh and ſkin, from being tender, delicate, and irritable, become coarſe and firm;

the body in general loſes its ſucculency; and a new exiſtence ſeems to take place. The voice, a proof of the tenſion and rigidity of the muſcular fibre, loſing its tenderneſs and inequalities, becomes ungratefully harſh; and the mind itſelf, actuated by the progreſs of the body, and forgetting all its former inclinations and attachments, acquires diſtinctly new propenſities and paſſions. The changes are not entirely the effect of ordinarily progreſſive age and ſtrength; neither are they promoted by intercourſe with the world; for caſtration will anticipate them, and premature venery, or even gradual familiarity, and early onaniſm, will diminiſh them. Boys, who have been ſubjected to caſtration, never acquire either that ſtrength of body or capacity of mind which dignifies the complete male; and the ſame cruel and unnatural operation performed on brute animals diminiſhes their bodily ſtrength, their courage, and liberty, and the fierceneſs of their temper.

If ſuch are the effects of the ſeminal fluid when reſorbed by the male, how powerful muſt it be when ſuddenly mingled, and moſt probably in greater quantity, with the circulating fluids of the attracting female! Coition, or rather the abſorption of the ſeminal fluid of the male by the female, even when not ſucceeded by impregnation, induces an alteration very general over the female ſyſtem; the local influence of which may be inferred from the general change which it is capable of inducing during complete health; from the relief which it effectuates in many ſpecies of diſeaſe; and from the general vivacity and cheerfulneſs diffuſed

over

over the whole animal frame. It would be prolix to go over every diſeaſe which will warrant theſe opinions; yet in the eye of common obſervation, the ſallow and inanimate female, by coition, often becomes plump and robuſt, beautiful and active; while the widow or married woman, deprived of commerce with her huſband, gradually returns to the imperfections and peculiarities of ſingle life; and that the ancient virgin, all her life deprived of this animating effluvia, is generally conſumed with infirmity, ill-temper, or diſeaſe. It is well known, too, that the want of coition, at the time of life when nature ſeems to require it, induces many diſorders in females; and that the uſe of it removes theſe, and even other diſeaſes. Chloroſis or the whites almoſt always attack females immediately after puberty; and, even when the violence of its ſymptoms have not been diſcerned till a later period, its origin can always be traced back to that time. When the human ſyſtem is completely evolved, and all its parts have acquired their full growth, a balance is produced between the circulating and ſolid ſyſtems; though, from the ideas we have ſuggeſted concerning the menſes, this balance in the female cannot ſtrictly be called complete. It is only complete in her when in perfect health, and in an impregnated ſtate; at other times, the catamenia, as preponderating againſt the powers of the ſolid ſyſtem, in proportion to the degree of their period, diſturb the equilibrium, and thereby more or leſs induce a ſtate inconſiſtent with perfect health. But when the propelling power of

growth has ceaſed before the ſolids, either from actual diſeaſe, or want of uniformity in either period, or acceſſion with reſpect to the progreſs of the circulating ſyſtem, have acquired their proper vigour and tone, and when the catamenia has aſſumed its deſtination before it is accompanied by the general as well as local energy which is requiſite to expel it, an univerſal want of balance comes on; the blood loſes its ſtimulating influence on the vitiated ſolids, and theſe, in their turn, act feebly on the diſtempered blood. Accordingly, in the cure of this diſeaſe, no matter whether adopted from particular theories or from experience, medicines are directed to reſtore vigour to the ſolids, and conſiſtence and ſtimulus to the circulating maſs. Nature proceeds in the ſame manner; and the beneficial effects of coition in the cure of this diſeaſe have been too material to eſcape obſervation. It may be alleged, that theſe effects depend entirely upon local influence; and that even voluptuous gratification, by quieting the turbulence of paſſion, is of conſequence in the cure. We ſhall not ſay that theſe things are unavailing; for it appears that the relief obtained is chiefly owing to the increaſed inteſtine motion, and conſequent ſtimulus, communicated to the blood by the abſorbed ſemen, whereby the ſolids themſelves are ultimately reſtored; and we are the more confirmed in this opinion, becauſe all theſe fortunate effects attend, whether coition be ſucceeded by impregnation or not. Hyſterics, and other diſeaſes, would furniſh us with ſimilar explanations and ſimilar cures.

Let

Let us now advance a little nearer our object. It is beyond a doubt, that, in whatever manner the ſemen acts upon the female, it does not act ſuddenly, notwithſtanding the general aſſertions of many authors. However productive coition may be, the fecundated product of the ovaria is not immediately diſengaged. We dare not avouch this fact from obſervations made on the human ſubject, becauſe ſuch obſervations never have been attempted, nor ever can with the ſmalleſt probability of ſucceſs: but the diſſection of brutes, by the moſt eminent anatomiſts, with a direct view to the elucidation of this fact, aſcertains it as far as ſuch evidence can be admitted. In the diſſection of ſmall animals by De Graaff, he found no diſcernible alteration in the uterus during the firſt forty hours after coition, but a gradual change was perceivable in the ovaria; and what he ſuppoſed the ripened origin of the future animal, at the end of that time, loſing its tranſparency, became opaque and ruddy. After that time, the fimbriæ were found cloſely applied to the ovaria; the cavities from whence the ova had been expreſſed were diſcernible; and about the third day the ova were diſcovered in the uterus. In large animals, and in thoſe whoſe time of uterine geſtation was longer, it was found that the progreſs which we have been deſcribing was proportionably ſlower. The ſame experiments have been made by different anatomiſts, and perhaps with very different views; and, though they have not always been managed with the ſame judgment and dexterity, yet all of them more or leſs

confirm

confirm the idea that there is a very conſiderable lapſe of time intervening between productive copulation and the expulſion of the ovum from the ovaria. But if this be the caſe with animals which ſoon arrive at puberty, and which, like human creatures, copulate not perfectly before puberty,—whoſe lives are ſhort, and progreſs in equal periods of time more rapid than thoſe in man,—by parity of reaſon, it muſt happen, that in women the period between impregnation and the expulſion of the fecundated product of the ovaria muſt be conſiderably greater than what has been obſerved to take place in theſe animals. If all this be true---how are we to ſuppoſe nature to be employed during this interval? We believe it is during this period that the whole female conſtitution is labouring under the fecundating influence of the ſeminal fluid taken into the blood by the abſorbents; while the ovaria are largely participating, and their product ripening, by means of the general ſtimulating proceſs. And the ſame proceſs which maturates the ovum tends to facilitate its excluſion. The ovaria, as well as their product, are at this time enlarged, and other changes, ſubject to the examination of our ſenſes, induced. It is no proof againſt the reality of this general alteration in the circumſtances of the circulating ſyſtem, and conſequent revolution in the ovaria, that the whole is accompliſhed with but little viſible diſturbance, either local or univerſal. In other caſes of material alteration in the maſs of blood, equal quietneſs and obſcurity prevail. In ſcrophulous or ſcorbutic taints; in the inoculated ſmall-pox, or

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when they are produced by contagion; the poiſon ſilently and ſlowly diffuſes itſelf throughout the whole maſs, and a highly morbid ſtate is imperceptibly induced. Thus, an active and inſinuating poiſon intimately mixes itſelf with all the containing, perhaps, as well as contained, parts, perverts their natures, and is ready to fall upon and deſtroy the very powers of life, before one ſymptom of its action or of its influence has been diſcerned. It is the ſame in a confirmed lues, and it is even more remarkable in the hydrophobia derived from the bite of a mad dog; and the whole round of contagious diſeaſes have the ſame unalarming, yet certain, progreſs and termination.

That the final influence of this elaborate proceſs ſhould be determined particularly, and at all times, to the ovaria, is no way marvellous. To qualify the ovaria for this, they are ſupplied with a congeries of blood-veſſels and nerves, at puberty larger and more numerous than what is allotted to any other part of ſimilar magnitude. Were the ovaria merely a receptacle for the ova, which the venereal orgaſm, communicated by the nerves, or by the impulſion of the applied ſemen, was to lacerate; what uſe would there be for ſo intricate and extenſive an arrangement of blood-veſſels and nerves? But we may farther remark, that every diſtinct proceſs in the human body, either during health or diſeaſe, tends to one particular and diſtinct purpoſe. The kidneys do not ſecrete bile, nor does the liver ſtrain off the uſeleſs or hurtful parts of the blood which are deſtined to paſs off by the emulgents; neither

neither do the ſalivary and bronchial glands promiſcuouſly pour out mucus or ſaliva; the variolous virus does not produce a morbillous eruption, ſyphilitic caries, or ſcrophulous ulcer; why then ſhould the fecundated blood unconcernedly and promiſcuouſly determine its energy to the ſkin, the lymphatics, or the ſubſtance of the bones? We know none of the operations in the human body, deſtined for the ordinary purpoſes of life and health, or for the removal of diſeaſe, but in a greater or leſs degree involve the machinery of the whole ſyſtem. A ſingle mouthful of food, while it is prepared, purified, and applied to its ultimate purpoſes, is ſubjected to the action of all the known parts of the body, and without doubt to all thoſe parts the properties of which we are unacquainted with; a draught of cold water ſpreads its influence almoſt inſtantaneouſly from one extremity to the other; the ſlighteſt wound diſturbs even the remoteſt parts, and is followed, not unfrequently, with the moſt unhappy effects; an almoſt inviſible quantity of poiſon ſets the whole frame in torture, and all the active powers of the body inſtinctively exert themſelves to ſolicit its expulſion: --- Can we diſtinguiſh theſe things, and admire them, and then ſuppoſe that the moſt material operation of the human body---the renovation of itſelf, is to be accompliſhed in a corner, and with infinitely leſs formality and ſolemnity than a ſpittle is caſt upon the wind? The evident means are ſufficiently degraded; we need not exert our ingenuity to degrade them farther.

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It is during this interval, between productive coition and the exclusion of the ovum from the ovaria, that likeness, hereditary diseases, and the like, are communicated and acquired. Instead of that influence which the imagination of the mother is supposed to possess over the form of the child, might we not suspect, that the seminal fluid of the male, co-operating during this interval with the influence of the female upon the ovum, instigated a likeness, according to the influence of the male and female tinctures, in the united principles? It is during this period only that the diseases of the male can be communicated to the child; and, if we admit not of this internal and general operation of the seminal fluid, we cannot see how they can be communicated, though those of the mother may be communicated then or at a much later period, considering how the child is nourished while it is in the uterus and at the breast. It may be urged against this early and effectual acquisition of likeness, that the fœtus does not acquire even the division of its largest members till long after its exclusion from the ovaria: but then we are confident, that, as the fœtus takes all its form and other properties from the active subtilty of these blended tinctures, we cannot see any reason why it should not possess this hereditary faculty, in common with the rest. If likeness depends upon the imagination of the female, how happens it that the children of those whose profligate manners render the father uncertain, and whose affections cease with the instant of libidinous gratification, are as frequently distinguishable by their

likeneſs as thoſe children who have been born under none of thoſe misfortunes? If the features are not planted during this period, and if imagination be not idle or uſeleſs, how was the ſix-fingered family, mentioned by Maupertuis, continued? When a female of that family married a man who had only the uſual number of fingers, the deformity of her family became uncertain, or ceaſed; and we muſt ſuppoſe her imagination could not have been inactive or diminiſhed, whether alarmed by the fear of continuing a deformed race, or inſtigated by the vanity of tranſmitting ſo remarkable a peculiarity. Was imagination, in a pregnant woman, ſo powerful as many have endeavoured to repreſent it, the mother, profligate at heart, though not actually wicked, would always betray the apoſtacy of her affections; and even a virtuous woman might divulge that ſhe had looked with as much eagerneſs at a handſome ſtranger, as ſhe had looked at the aquiline noſe, or other prominent feature, of her huſband.

But admitting that the ſeminal fluid of every male poſſeſſes ſome kind of influence peculiar to that male, and connected with his form, as well as his conſtitution; in the ſame, or in ſome ſimilar manner, it contains, notwithſtanding the elaborateneſs of its preparation, the ſtamina of diſeaſes, ſome of which often lie longer dormant than even the features of individuals; that the ova are as peculiarly conſtructed by the conſtitution of the female, as any other parts which depend upon gradual and ſolitary evolution; and that theſe, operating upon each other by the interven-

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tion of the general ſyſtem of the female, may, according to the power or prevalence of either, affect the features and figure of the incipient animal, or rather the inorganized maſs from which the features and figure of the animal are afterwards to be evolved: admitting all theſe things, will national or even more extenſive ſimilitude corroborate the opinion?

We ſhall have occaſion to remark, that the preſervation and continuation of the particular ſpecies appear to proceed from that parent, who, in the act of procreation, has diſcovered moſt ſtrength and vigour; and this is commonly the father. A young negro woman in Virginia, after having brought forth for the firſt time a black child, was delivered a ſecond time of twins; one of them, a boy, was black, and the other who was a girl, was a mulatto. As the boy grew up, he retained his ſhort hair, which was naturally frizzled, and had a reſemblance to wool; other marks plainly ſhewed that he was a true negro, and in every reſpect like the black father who had begotten him. The girl on the other hand was tolerably white; ſhe had blue eyes, long black hair, without any natural curl; in ſhort, ſhe had a great reſemblance to the overſeer of the plantation, whom the negro huſband ſuſpected of cohabiting with his wife. Becoming pregnant a third time, ſhe was delivered of three children, two of them mulattoes, and the other a perfect negro. Shall we aſcribe this to the effect of imagination? Such an explanation is rejected by the philoſopher as abſurd, and contrary to every law of nature. We can account

for the third delivery, therefore, only by admitting the cohabitation of two fathers of different races, and then a ſuperfœtation.

While men continue in the ſame climate, and even in the ſame diſtrict, an uniform peculiarity of features and figure prevails among them, little affected by all thoſe changes which improve or degrade the mind; but when they migrate, or when they are corrupted by the migration of others, this national diſtinction in time is loſt, though in the latter caſe it ſeems to be recoverable, unleſs the cauſe of change be continued The beautiful form and features of the ancient Greeks are at this day diſcernible in their deſcendants, though they are debaſed by intercourſe with ſtrangers, and by forms of government ultimately affecting their conſtitutions; the deſcendants of the few, who by chance or deſign have been obliged to ſettle among the ugly tribes in the extremity of the north, have, by their intercourſe with theſe tribes, and by neceſſarily accommodating themſelves to the ſame courſe of life, beſides other circumſtances, become almoſt equally ugly; and the Jew himſelf, though he abhors to mingle with a different nation, and though his mode of life is nearly the ſame in all climates, yet the ſettlement of his anceſtors in any other particular climate for ſome centuries will very ſenſibly impair the characteriſtic features of his people. As equally in point, and leſs liable to queſtion, we may mention the following ſimilar obſervations. A Scotchman, an Engliſhman, a Frenchman, or a Dutchman, may, even without their

peculiarities

peculiarities of dreſs, be almoſt always diſtinguiſhed in their very pictures; the ſturdy and generous Briton, notwithſtanding the ſhortneſs of the period, and the interrupted intercourſe, is traced with uncertainty in the effeminate Virginian; and the African negroes in North America, whoſe families have continued ſince the firſt importation of theſe unhappy creatures, and whoſe modes of living, excluſive of their ſlavery, are not materially changed, are much leſs remarkable for the flat noſe, big lips, ugly legs, and long heels, than their anceſtors were, or than thoſe who are directly imported from the ſame original nation. From theſe obſervations it ſeems allowable to infer, that, though climate, manners, occupation, or imitation, cannot materially affect the form or features of the exiſting animal; yet theſe circumſtances, becoming the lot of a ſeries of animals, may, by inducing a change in the general maſs both of the male and female, be the remote cauſe of a change in their product.

After what has been premiſed, it ſeems rational to conclude, that the prolific fluid, in coition, is neither carried through the Fallopian tubes, nor protruded through the apertue of the uterus, to the ovaria; but that it is taken up by the abſorbent veſſels, and conveyed into the ſanguiferous ſyſtem; where indeed every active principle that can poſſibly affect the human conſtitution is alſo conveyed. That, by circulating through the blood, it is, by its natural impulſe and the additional ſtimulus acquired from the mother, forced through the correſponding veſſels into the ovaria; where, if it finds

one

one or more of the ova in a ſtate fit or ripe for impregnation, conception takes place accordingly; and either one or more are impregnated, as the maturated ſtate of the ovaria might happen to be. But if none of the ova or eggs are in a ſtate ſufficiently mature, or chance to be injured by any offending humours by debility, or diſeaſe, in either of theſe caſes impregnation is fruſtrated, juſt the ſame as happens to an addled egg, or to a damaged grain of corn thrown into the earth.

On the other hand, if the male organ be deficient in vigour, or the ſemen defective in quantity, conſiſtency, or active power, it then fails of ſtimulating the female fluid, and is incapable of influencing impregnation. In order therefore that the act of copulation ſhould be productive, the male muſt unqueſtionably convey to the female an elaborate tincture, which poſſeſſes the eſſences of his whole ſyſtem, both mental and corporeal. In this act, the utmoſt energy and powers of the mind, of the body, and of the ſoul, are intimately connected; and all contribute their particular influence to the ſeed; of which every father muſt be ſenſible, when he recollects the action of the heart, the ſeat of life—of the brain, the ſeat of the ſoul—and of the whole powers of the body, concentrated and impelled, as it were, through the genital ſyſtem. That this liquor comprehends the active principles of body and ſoul, will not, I think, be doubted by thoſe who give the foregoing arguments their proper weight; and that it conveys with it, more or leſs, the direct image of the parent, I take to be confirmed by the evidence of the

ſcripture;

ſcripture ; where we are told that one abſolute and unequivocal form was given to man, in the expreſs image of the Deity. So that man, thus organized and commiſſioned, was doubtleſsly to convey to future generations that divine image or ſignature which God had graciouſly ſtamped upon him. For this purpoſe the ſeed of man, or efficient principle of generation, muſt be mingled with the vegetative fluid of the female ; and, being attracted or taken up by the abſorbent veſſels from the uterine canal, paſſes immediately into the circulating ſyſtem, where, aſſimilating with the peculiar temperature of the mother, and acquiring new energy from the enlivening quality of the blood, it is directed through its natural channels to the ovaria, impregnating the germ by its active quality, and conveying to it the peculiarities it had derived from the conſtitutions, forms, tempers, and diſpoſitions, of the parents, with the ſeeds of whatever diſeaſes, impurities, or taints, were lurking in their blood. For from the blood and brain is the male ſeed primarily elaborated, and into the female maſs is this thrown and aſſimilated, before impregnation can poſſibly take place. In the courſe of ſix days, I conclude the united tinctures to have travelled through the whole circulating ſyſtem,—to have participated of the hereditary forms and peculiarities of the mother, and to have propelled the ovum or egg from its ſeat in the ovaria to a ſuſpended ſituation in the womb, hanging by a minute thread, that afterwards becomes the umbilical veſſel,

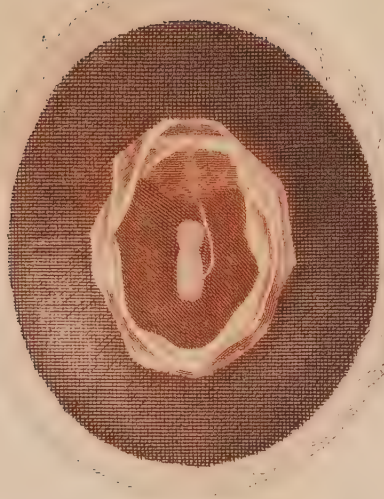
or

or aperture through which nouriſhment and life are conveyed from the mother to the child. This firſt viſible ſtate of conception, which reſembles the lucid appearance of a drop of water, tending to coagulation, is correctly ſhewn in the firſt figure of the annexed plate, preciſely in the ſtate it was extracted from the uterus of a female, who died on the ſixth day after contact with the male.

At the time the ovum, or rudiments of the embryo, deſcends into the womb, it is indeed very minute; but at the end of about thirty days we may partly diſcover the firſt lineaments of the fœtus, though ſmall and imperfect, being then only about the ſize of a houſe fly. Two little veſicles appear in an almoſt tranſparent jelly; the ſmalleſt of which is intended to become the head of the fœtus, and the larger one is deſtined for the trunk; but neither the limbs nor extremities are yet to be ſeen; the umbilical cord appears only as a minute thread, and the placenta, which only reſembles a cloud above, has no ramifications, or appearances of blood-veſſels. This ſtate of the embryo is expreſſed in the ſecond figure of the annexed plate.

Towards the end of the ſecond month, the fœtus is upwards of an inch in length, and the features of the face begin to be evolved. The noſe appears like a ſmall prominent line; and we are able to diſcover another line under it, which is deſtined for the ſeparation of the lips. Two black points appear in the place of the eyes, and two minute holes mark the formation of the ears. At the ſides of the trunk, both above and below,

Conception.



First Month.

Second Month.

Third Month.

Fourth Month.

Dodd del.

J.Pass sculp.

Formation of the Human Fœtus.

Plate I.

Published as the Act directs. June 20th. 1794.

low, we ſee four minute protuberances, which are the rudiments of the arms and legs. The veins of the placenta are alſo now partly viſible: as may be ſeen in No. 3. of the annexed plate.

In the third month the human form may be decidedly aſcertained; all the parts of the face can be diſtinguiſhed; the ſhape of the body is clearly marked out; the haunches and the abdomen are elevated, and the hands and feet are plainly to be diſtinguiſhed. The upper extremities are obſerved to increaſe faſter than the lower ones; and the ſeparation of the fingers may be perceived before that of the toes. The veins of the placenta are now diſtended, and are ſeen to communicate with the umbilical tube. This ſtate of geſtation is faithfully delineated in No. 4. of the annexed engraving.

In the fourth month the fœtus ſeems to be completed in all its parts, and is about four inches in magnitude. The fingers and toes, which at firſt coaleſced, are now ſeparated from each other, and the inteſtines appear, in all their windings and convolutions, like little threads. The veins of the placenta begin to be filled with blood, and the umbilical cord is conſiderably enlarged; as may be ſeen in the fifth figure of the ſubjoined plate.

In the fifth month, the bodily conformation being perfected, and a complete circulation of the blood induced, the mother quickens. The fœtus now aſſumes a more upright figure, which correſponds with the ſhape of the uterus. Its head is found more elevated,

its lower extremities are more diſtended, its knees are drawn upwards, with its arms reſting upon them. It now meaſures from ſeven to eight inches in length, and is deſcribed in the firſt figure of the ſecond ſubjoined plate.

Towards the end of the ſixth month, the fœtus begins to vary its poſition in the womb, and will frequently be found to incline either to the right or to the left ſide of the mother. It will by this time be increaſed to nine or ten inches; and its uſual poſture after quickening may be ſeen in the ſecond figure of the ſecond annexed plate.

In the ſeventh month the child acquires ſtrength and ſolidity, as may be demonſtrated by thoſe painful throws and twitchings which its mother feels from time to time; and it is now increaſed to eleven or twelve inches.

In the eighth month it generally meaſures from fourteen to ſixteen inches; and, in the ninth month, or towards the end of its full time, it is increaſed from eighteen to twenty-two inches, or more; when the head, by becoming ſpecifically heavier than the other parts, is gradually impelled downwards, and, falling into the birth, brings on what are termed the pains of parturition or natural labour. For the exact poſition of the child in the womb, during theſe laſt three months, as well as the former, ſee the correſponding figures in the two annexed engravings, the whole of which were correctly drawn from real fœtuſes, extracted from the wombs of different women.

The

Fifth Month

Sixth Month

Seventh Month

Eighth Month

Ninth Month

Formation of the Human Fetus. Plate II.

Dodd del

Published as the Act directs June 20th 1794.

The nouriſhment of the fœtus during all this time is derived from the placenta, which is originally formed out of that part of the ovum which is next the fundus uteri. The remaining part of the ovum is covered by a membrane called *ſpongy chorion;* within which is another called *true chorion;* which includes a third, termed *amnios*. This contains a liquor, or watery fluid, in which the fœtus floats till the time of its birth. Before the child acquires a diſtinct and regular form, it is called *embryo;* but, from the time all its parts become viſible, it takes and retains the name of fœtus till its birth. During the progreſs of impregnation, the uterus ſuffers conſiderable changes; but though it enlarges as the ovum increaſes, yet, in regard to its contents, it is never full; for, in early geſtation, theſe are confined to the fundus only; and, though the capacity of the womb increaſes, yet it is not mechanically ſtretched, for the thickneſs of its ſides do not diminiſh; there is a proportional increaſe of the quantity of fluids, and therefore pretty much the ſame thickneſs remains as before impregnation. The gravid uterus or pregnant womb is of different ſizes in different women, and muſt vary according to the bulk of the fœtus and involucra. The ſituation will alſo vary according to the increaſe of its contents, and the poſition of the body. For the firſt two or three months, the cavity of the fundus is triangular, as before impregnation; but, as the uterus ſtretches, it gradually acquires a more rounded form. In general, the uterus never

riſes directly upwards, but inclines a little obliquely, moſt commonly to the right ſide; its poſition is never, however, ſo oblique as to prove the ſole cauſe, either of preventing or retarding delivery; its increaſe of bulk does not ſeem to ariſe merely from diſtenſion, but to depend on the ſame cauſe and increaſe as the extenſion of the ſkin in a growing child. This is proved from ſome late inſtances of extra-uterine fœtuſes, where the uterus, though there were no contents, was nearly of the ſame ſize, from the additional quantity of nouriſhment tranſmitted, as if the ovum had been contained within its cavity. The internal ſurface, which is generally pretty ſmooth, except where the placenta adheres, is lined with a tender efflorescence of the uterus, which, after delivery, appears as if torn, and is thrown off with the cleanſings. This is the *membrana decidua* of Dr. Hunter, which he deſcribes as a lamella from the inner ſurface of the uterus; though Signor Scarpa, with more probability, conſiders it as being compoſed of an inſpiſſated coagulable lymp.

Though the uterus, from the moment of conception is gradually diſtended, by which conſiderable changes are occaſioned, it is very difficult to judge of pregnancy from appearances in the early months. For the firſt three months the os tincæ feels ſmooth and even, and its orifice as ſmall as in the virgin ſtate. When any difference can be perceived, about the fourth or fifth month, from the deſcent of the fundus through the pelvis, the tubercle or projecting part of the os tincæ

tincæ will ſeem larger, and more expanded; but after this period, it ſhortens, particularly at its fore-parts and ſides, and its oriſice or labia begin to ſeparate, ſo as to have its conical appearance deſtroyed. The cervix, which in the early months is nearly ſhut, now begins to ſtretch and be diſtended to the os tincæ; but, during the whole term of utero-geſtation, the mouth of the uterus is ſtrongly cemented with a ropy mucus, which lines it and the cervix, and begins to be diſcharged on the approach of labour. In the laſt week, when the cervix uteri is completely diſtended, the uterine orifice begins to form an electrical tube, inſtead of a fiſſure, or to aſſume the appearance of a ring on a large globe; and often at this time, eſpecially in pendulous bellies, diſappears entirely, ſo as to be out of the reach of the finger in touching. Hence the os uteri is not in the direction of the axis of the womb, as has generally been ſuppoſed.

About the fourth or between the fourth and fifth month, the fundus uteri begins to riſe above the pubes or brim of the pelvis, and its cervix to be diſtended nearly one third. In the fifth month the belly ſwells like a ball, with the ſkin tenſe, the fundus about half way between the pubes and navel, and the neck one half diſtended. After the ſixth month the greateſt part of the cervix uteri dilates, ſo as to make almoſt one cavity with the fundus. In the ſeventh month the fundus advances as far as the umbilicus. In the eighth it reaches mid-way between the navel and ſcrobiculus cordis; and in the ninth to the ſcrobiculus itſelf, the neck

neck then being entirely diſtended, which, with the os tincæ, become the weakeſt part of the uterus. Thus at full time the uterus occupies all the umbilical and hypogaſtric regions; its ſhape is almoſt pyriform, that is more rounded above than below, and having a ſtricture on that part which is ſurrounded by the brim of the pelvis. The appendages of the uterus ſuffer very little change during pregnancy, except the ligamenta lata, which diminiſh in breadth as the uterus enlarges, and at full time are almoſt entirely obliterated.

The various diſeaſes incident to the uterine ſyſtem, and other morbid affections of the abdominal viſcera in weak and ſickly females, will frequently excite the ſymptoms, and aſſume the appearance, of real pregnancy. Complaints ariſing from a ſimple obſtruction are ſometimes miſtaken for thoſe of breeding; when a tumour about the region of the uterus is alſo formed, and gradually becomes more and more bulky, the ſymptoms it occaſions are ſo ſtrongly marked, and the reſemblance to pregnancy ſo very ſtriking, that the ignorant patient is often deceived, and even the experienced phyſician impoſed upon.

Schirrhous, polypous, or ſarcomatous, tumours, in or about the uterus or pelvis; dropſy or ventoſity of the uterus or tubes; ſteatoma or dropſy of the ovaria, and ventral conception; are the common cauſes of ſuch fallacious appearances. In many of theſe caſes the menſes diſappear; nauſea, retchings, and other ſymptoms of breeding, enſue; flatus in the bowels will be miſtaken for the motion of the child; and in the advanced

vanced ſtages of the diſeaſe, from the preſſure of the ſwelling on the adjacent parts. Tumefaction and hardneſs of the breaſts ſupervene, and ſometimes a viſcid or ſerous fluid diſtils from the nipple; circumſtances that ſtrongly confirm the woman in her opinion, till time, or the dreadful conſequences that often enſue, at laſt convince her of her fatal miſtake.

Other kinds of ſpurious gravidity, leſs hazardous in their nature than any of the preceding, are commonly known by the names of *falſe conceptions* and *moles*: the former of theſe is nothing more than the diſſolution of the fœtus in the early months; the placenta is afterwards retained in the womb, and from the addition of coagula, or in conſequence of diſeaſe, is excluded in an indurated or enlarged ſtate: when it remains longer and comes off in the form of a fleſhy or ſchirrhous-like maſs, without having any cavity in the centre, it is diſtinguiſhed by the name of mole. Mere coagula of blood retained in the uterus after delivery, or after immoderate floodings at any period of life, and ſqueezed, by the preſſure of the uterus, into a fibrous or compact form, conſtitute another ſpecies of mole, that more frequently occurs than any of the former. Theſe, though they may aſſume the appearances of gravidity are generally, however, expelled ſpontaneouſly, and are ſeldom followed with dangerous conſequences. But, when two or more of the ova deſcend into the uterus, attach themſelves ſo near one another as to adhere in the whole or in part, ſo as to form only one body, with membranes and water in common, this body will form

form a confuſed irregular maſs, which is called a *monſter;* and thus a monſter may be either defective in its organic parts, or be ſupplied with a ſupernumerary ſet of parts derived from another ovum. This proceeds from a defect or accident in nature, which no human power can rectify or prevent.

It would ſeem, however, from a due contemplation of the foregoing facts, from the frame and ſtructure of females, and from the ultimate end and purpoſe of their conformation, that almoſt every malady reſulting from a ſtate of pregnancy, except the laſt-mentioned, may be in a great meaſure prevented or removed. The natural temperature of women differs in a very conſiderable degree from that of men, inaſmuch as their blood and juices are determined to a peculiar and diſtinct purpoſe; and hence it is that obſtructions of the menſes, their exceſs, or privation of the office intended them, conſtitute thoſe peculiar maladies which we term *Diſeaſes of Women.* The natural temperature of the male, is *hot* and *dry;* that of the female, *cold* and *moiſt.* The action of the procreative tincture of man, is SOLAR, i.e. of a heating and quickening faculty; that of the woman is LUNAR, i.e. of a cool and vegetative quality. As the ſun heats, and gives prolific energy to the fruits of the earth, ſo man fecundates and gives life to the prolific tincture of the woman. Thus the female, as the microcoſm, or epitome of the celeſtial ſyſtem, poſſeſſes an inherent ſimilitude with the moon, vegetates and brings forth the fruit of her womb, and not only feels the influence and ſympathy of that luminary

luminary in her monthly diſcharges, but in all the travail and viciſſitudes of pregnancy.* To the ſame ſource likewiſe we trace the cauſe, and decide the queſtion, Whether the fruit of the womb be male or female? for, if the male ſeed be predominant, heat will abound, and a male fœtus will be generated; but, if the cooling moiſture of the woman overcomes the maſculine heat in the male ſeed, a female is then produced. The old and exploded notion, of this cauſe depending on the child's falling on the right or left ſide of the mother, is too abſurd to weigh a moment on the mind of any reaſonable enquirer.

We diſcover likewiſe that the male, being conſtituted of the Solar temperature, is naturally ſubjected to thoſe infirmities of body and mind, which reſult from the elements of fire and air; while thoſe of the female are of Lunar tendency, ariſing from the elements of water and earth. Of theſe four elements our groſs or material part is formed, and by their due and proper commixture in the conſtitution or circulating maſs, are life and health eſtabliſhed: whilſt, on the contrary, by their diſcordant, defective, or predominant, power, diſeaſe and death are produced. Now the male abounding in heat, and the female in moiſture, is the reaſon why many diſorders incident to man are alleviated by contact with the woman; as thoſe of the

* The celeſtial influence of the human frame, with the aſtoniſhing effects of occult and ſecondary cauſes, the preſcience of Futurity, and the calculation of Nativities, by the motions and poſitions of the Stars, may be ſeen in my new edition of the OCCULT SCIENCES, now publiſhing in weekly numbers, at Eight-pence each, or in 2 vols. boards, price 2 guineas; or complete, with the KEY, price 3l.

woman are by contact with the man. In the grand ſcale of nature, we find the meridian heat and ſcorching rays of the Sun are qualified and corrected by the cooling moiſture and mild influence of the midnight Moon; but when either of theſe are obſtructed in their effect, by the intervention of accidental cauſes, by ſtorms, by tempeſts, or unſeaſonable blaſts, we then endeavour to repreſs by art the evil conſequences that are likely to enſue. Juſt ſo in the human œconomy, the grand purpoſe and deſign of medicine is to correct and modify the diſcordant elements in the conſtitution, and give that vigour and tone to the vital powers, which conſtitute the genuine principles of health and life.

From what has been ſuggeſted we might ſafely infer, that the conſtitution and temperature of the female requires a medicine of an oppoſite action and tendency to that adapted to the male, and which ought to be compounded of elements congenial to the intentions of nature, calculated to purge the uterus, to purify the ſeminal fluid, and give ſtimulus to the catamenia; which, if not put in motion by the functions of nature, become dull and ſtagnant, and vitiate the whole circulating maſs; whence thoſe diſorders, peculiarly incident to the moſt amiable, as being the moſt virtuous, of women, are confeſſedly derived; and for the cure and prevention of which a peculiar and diſtinct remedy has long been wanting.

These and other conſiderations, influenced by the known power of ſecond cauſes, and their faculty of acting upon the mechaniſm of the human frame, induced

duced me to attempt the chemical preparation of two ſubtile Tinctures, conſtituted of a co-mixture of the pureſt elements of which our blood is compoſed, and adapted to the peculiar temperatures and conſtitutions of the oppoſite ſexes. That intended for the uſe of Man, I call the SOLAR TINCTURE, as being congenial to the ſeminal functions and vital principles of his conſtitution. That adapted to Woman, I call the LUNAR TINCTURE, as being calculated to act upon the menſtrual and vegetative fluids, and as being compounded of thoſe elements which make up the frame and temperature of her body. The invention of theſe Tinctures hath been the reſult of a long and a laborious application to the ſtudy of unveiled nature---of the properties of fire, air, earth, and water, in the propagation of animal and vegetable life, and in the compoſition of medicine; in which, though theſe elements form the PABULUM of the univerſe, yet the art of collecting, uniting, and aſſimilating, them with the vital fluids, ſeems to be unknown among the modern chemiſts, and hath eſcaped the obſervation of medical ſcience. The fixidity of theſe tinctures at once eſtabliſhes their power and efficacy beyond all others; for they can never be affected by change of weather or climate, nor by heat or cold; nor will they ſuffer any diminution of ſtrength or virtue by remaining open, or uncorked; a circumſtance which cannot be affirmed of any other fluid at preſent known, throughout the world.

I ſhall now proceed to ſhew the action of the Lunar Tincture on female conſtitutions; and, as this medicine is only intended to remedy ſuch complaints as

particularly relate to pregnancy and the menſtrual diſcharge, I ſhall omit to notice any other maladies, until I come to treat of the Solar Tincture; which, though eſſentially directed to give tone and vigour to the conſtitution of the male, nevertheleſs equally efficacious to the female in removing all diſorders of the blood and lymph, that are alike common to valetudinarians of both ſexes. No complaint in the female habit, therefore comes under our preſent enquiry, till at or near the age of puberty. Until this important period of the ſex arrives, the rules heretofore laid down in the Medical Part of my Engliſh Phyſician, for the management and future health of young ladies, deſerve a very cloſe and ſerious attention. The evident diſtinction between the male and female in their ſtructure and deſign---in their bodily ſtrength and vigour, and in the procreative fluids, demands the utmoſt attention from themſelves, and the tendereſt care from the phyſician. Nor can we too often nor too earneſtly caution parents and guardians againſt the evils of that abſurd though faſhionable ſtile of bringing up young ladies, by confining them almoſt entirely to their apartments, keeping them on poor low diet, and uſing artificial means to make them ſpare and delicate, which contribute more to their prejudice than all the incidental diſeaſes to which they are otherwiſe ſubject. Theſe refinements in a female education, beſides deſtroying their ruddy complexion, (which is often the deſign of them,) relax their ſolids, impoveriſh their blood, weaken their minds, and diſorder all the functions of their body, whereby they are often rendered incapable of

conception,

conception, and denied the felicity of becoming mothers. On the contrary, it ought to be the ſtudy, as it certainly is the duty, of all that have girls under their care, to indulge them in every innocent diverſion, and in every active exerciſe, that can give freedom to the limbs, or agility to the body; all of which have a natural tendency to exhilarate their ſpirits, to promote digeſtion, to ſtimulate their blood and juices, and, at the proper age, to bring on a free and eaſy diſcharge of the menſtrual flux.

Though it be univerſally admitted, that this flux is abſolutely neceſſary to nouriſh and ſupport the fœtus, and that without it human generation cannot be carried on; and that it is conſequently and obviouſly peculiar to the female uterine ſyſtem; yet it is curious to obſerve the various abſurd and contradictory opinions ſome phyſicians have laboured to eſtabliſh, merely, one would ſuppoſe, to bewilder the underſtanding, and ſubject delicate females ſtill more to that erroneous or miſguided treatment, by which their health, their life, and every earthly bleſſing, are too frequently involved.

Dr. Bohn and Dr. Freind inſiſt that this flux is nothing more than a plenitude of the common maſs of blood, which nature throws off only for relief againſt the too-abundant quantity. Dr. Freind ſuppoſes, that this plenitude ariſes from a coacervation in the blood-veſſels of a ſuperfluity of aliment, which, he thinks, remains over and above what is expended in the ordinary ways; and that women have this plethora, and not men, becauſe their bodies are more humid, and their veſſels, eſpecially the extremities of them, more tender,

tender, and their manner of living generally more inactive that that of men; and that theſe things, concurring, are the occaſion that women do not perſpire ſufficiently to carry off the ſuperfluous alimentary parts, till they be accumulated in ſuch quantities as to diſtend the veſſels, and force their way through the capillary arteries of the uterus. It is ſuppoſed to happen to women more than to the females of other ſpecies, which have the ſame parts, becauſe of the erect poſture of the former, and the vagina and other canals being perpendicular to the horizon; ſo that the preſſure of the blood is directed towards their orifices; whereas, in brutes, they are parallel to the horizon, and the preſſure is wholly on the ſides of thoſe veſſels. The diſcharge, he thinks, happens in this part rather than in any other, as being favoured more by the ſtructure of the veſſels; the arteries being very numerous, and the veins ſinous and winding, and therefore more apt to retard the impetus of the blood; and conſequently, in a plethoric caſe, to occaſion the rupture of the extremities of the veſſels, which may laſt, till, by a ſufficient diſcharge, the veſſels are eaſed of their overload. To this he adds the conſideration of the ſoft pulpous texture of the uterus, and the vaſt number of veins and arteries with which it is filled. Hence a healthy maid, being arrived at her growth, begins to prepare more nutriment than is required for the ſupport of the body; which, as there is not to be any farther accretion, muſt of neceſſity fill the veſſels, and eſpecially thoſe of the uterus and breaſts, they being the leaſt compreſſed. Theſe will be di-

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lated more than the others; whence, the lateral vaſcules evacuating their humour into the cavity of the uterus, it will be filled and extended. Hence a pain, heat, and heavineſs, will be felt about the loins, pubes, &c. the veſſels of the uterus at the ſame time will be ſo dilated as to emit blood in the cavity of the uterus, and its mouth will be lubricated and looſened, and blood iſſue out. As the quantity of blood is diminiſhed, the veſſels will be leſs preſſed, and will contract themſelves cloſer, ſo as again to retain the blood, and let paſs the groſſer part of the ſerum; till at length only the uſual ſerum paſſes. Again, there are more humours prepared, which are more eaſily lodged in veſſels once dilated; and hence the menſes go and return at various periods in various perſons.

This hypotheſis is judiciouſly oppoſed by Dr. Drake, who maintains, that there is no ſuch plenitude, or at leaſt that it is not neceſſary to menſtruation; arguing, that, if the menſes were owing to a plethora ſo accumulated, the ſymptoms would ariſe gradually, and the heavineſs, ſtiffneſs, and inactivity, neceſſary ſymptoms of a plethora, would be felt long before the periods were completed, and women would begin to be heavy and indiſpoſed ſoon after evacuation, and the ſymptoms would increaſe daily; which is contrary to all experience; many women, who have them regularly and eaſily, having no warning, nor any other rule to prevent an indecent ſurpriſe, than the meaſure of time; in which, ſome that have ſlipped, have been put to confuſion and ſhifts no ways conſiſtent with the notice a plethoric

plethoric body would give. He adds, that even in thoſe who are difficultly purged this way, the ſymptoms, though very vexatious and tedious, do not make ſuch regular approaches as a gradual accumulation neceſſarily requires. If we conſider what violent ſymptoms come on in an hour, we ſhall be extremely puzzled to find the mighty acceſſion of matter, which ſhould in an hour or a day's time, make ſuch great alterations. According to the hypotheſis, the laſt hour contributed no more than the firſt; and, conſequently the alteration ſhould not be greater in the one than in the other, ſetting aſide the bare eruption.

There are others who give into the doctrine of fermentation, and maintain the evacuation in thoſe parts to be an effect of an efferveſcence or ebullition of the blood. This opinion has been maintained by Dr. Charleton, Bale, De Graaf, and Drake; the two firſt of whom ſuppoſe a ferment peculiar to the women, which produces this flux, and affects that part only, or at leaſt principally. De Graaf, leſs particular in his notion, only ſuppoſes an efferveſcence of the blood, raiſed by ſome ferment, without aſſigning how it acts, or what it is. The ſudden turgeſcence of the blood occaſioned them all to think, that it aroſe from ſomething till then extraneous to the blood, and led them to the parts principally affected to ſeek for an imaginary ferment, which no anatomical inquiry could ever ſhew, or find any receptacle for, nor any reaſoning neceſſarily infer. Again, that heat, which frequently accompanies this turgeſcence, led them to think the caſe

more

more than a plethora, and that there was ſome extraordinary inteſtine motion at that time.

Dr. Drake contends, that it is not only neceſſary there ſhould be a ferment, but a receptacle alſo for this ferment; concluding, from the ſuddenneſs and violence of the ſymptoms, that a great quantity muſt be conveyed into the blood in a ſhort time, and conſequently that it muſt have been ready gathered in ſome receptacle, where, while it was lodged, its action was reſtrained. He pretends to aſcertain the place both of the one and the other, making the gall-bladder to be the receptacle and the bile the ferment. The liquor he thinks well adapted to raiſe a fermentation in the blood, when diſcharged into it in quantity; and, as it is contained in a receptacle that does not admit of a continual iſſue, it may be there reſerved, till in a certain period of time the bladder becoming turgid and full through the compreſſion of the incumbent viſcera, it emits the gall; which, by the way of the lacteals, inſinuating itſelf into the blood, may raiſe that effervescence which occaſions the aperture of the uterine arteries. To confirm this, he alleges, that perſons of a bilious conſtitution have the menſes either more plentifully, or more frequently, than others; and that diſtempers manifeſtly bilious are attended with ſymptoms reſembling thoſe of women labouring under difficult menſtruation. But, if this argument be admitted, men would have the menſes as well as women. To this however he anſwers, that men do not abound in bile ſo much as women, the pores of the former being more open, and carrying off more of the ſerous part of the blood,

which is the vehicle of all other humours, and conſequently a greater part of each is diſcharged through them than in women, wherein the ſuperfluity muſt either continue to circulate with the blood, or be gathered into proper receptacles, which is the caſe in the bile. The ſame reaſon he gives why menſtruation ſhould not be in brutes: the pores of theſe being manifeſtly more open than thoſe of women, as appears from the quantity of hair which they bear, for the vegetation whereof a large cavity, and a wider aperture of the glands, is neceſſary, than where no ſuch thing is produced: yet there is ſome difference between the males and females even among theſe, ſome of the latter having their menſes, ſuch as the orang outang, &c.* though not ſo often, nor in the ſame form and quantity, as women. But without dwelling on theſe abſtract reaſonings, the abſurdity of which will be obvious to every perſon who turns to the foregoing ſyſtem of human impregnation, we need only remark, that there are two critical periods in every woman's life that completely deſtroy their hypotheſis. Theſe are, that at the age of fourteen or fifteen the menſes begin to flow; but ſubſide at the age of forty or fifty. At their commencement, we often find the difficulty, and conſequent diſeaſe, ariſes from their *deficiency;* whereas, according to the foregoing doctrine, they would then *always* flow with the greateſt freedom. At the period when they

* See this curious ſubject, concerning the orang outang, and other animals reſembling the human ſpecies, treated at large, both hiſtorically and philoſophically, in the ſecond volume of my Natural Hiſtory, particularly at p. 44.

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ſhould ceaſe, they are apt to come in ſuch abundance as to bring on a flooding, which not only endangers, but too frequently deſtroys, life—a fatal conſequence that could not poſſibly happen, were the above arguments true.

Of FEMININE or LUNAR DISEASES.

That the vegetative or procreative faculties of women are univerſally governed by the lunations of the moon, their own experience, as well as the demonſtrations given in my Treatiſe on the Occult Sciences, indiſputably prove. The firſt ſhow of the catamenia, if it be natural, invariably comes with the new or full moon; or ſometimes, though very ſeldom, at the commencement of her firſt or laſt quarters; and this effort of nature is juſtly conſidered as the ſure ſign of a procreating ability, and complete puberty. Whenever this ſeaſon arrives, whether early or late, the conſtitution of every female undergoes a conſiderable change, and the greateſt care and attention are then neceſſary, ſince the future health and happineſs of every woman depend, in a great meaſure, upon her conduct at this period. It is the duty of mothers, and thoſe who are entruſted with the education of girls, to inſtruct them early in the conduct and management of themſelves at this critical moment. Falſe modeſty, inattention, and ignorance of what is beneficial or hurtful at this time, are the ſources of many diſeaſes and misfortunes, which a very little attention might now prevent. Nor is care leſs neceſſary in the ſubſequent returns of this diſcharge. Taking improper food, violent agitations of the mind, or catching cold, is often

ſufficient to ruin the health, or render the female for ever after incapable of procreation.*

In order to eſcape the chloroſis, and other ſimilar diſeaſes, incident to young women at that period when the menſes commence, let them avoid indolence and inactivity, and accuſtom themſelves to exerciſe in the open air as much as poſſible. The diſcharge in the beginning is ſeldom ſo inſtantaneous as to ſurpriſe them unawares. The eruption is generally preceeded by ſymptoms that indicate its approach; ſuch as a ſenſe of heat, weight, and dull pain, in the loins; diſtenſion and hardneſs of the breaſts, head-ach, loſs of appetite, laſſitude, paleneſs of the countenance, and ſometimes a ſlight degree of fever. When theſe ſymptoms occur, every thing ſhould be carefully avoided which may obſtruct the diſcharge, and all gentle means uſed to promote it; as ſitting frequently over the ſteam of warm water, drinking warm diluting liquors, &c. When the menſes have begun to flow, great care ſhould be taken to avoid every thing that tends to obſtruct them; ſuch as ſalt fiſh, and all kinds of food that are hard of digeſtion, and cold acid liquors. Damps are likewiſe hurtful at this period; as alſo anger, fear, grief, and other affections of the mind. From what-

* The *ſecret* infirmities both of men and women, in every ſituation and ſtage of life, with the complete anatomy of the ſexes, and an elegant ſet of anatomical Plates; with an eaſy, ſimple, and radical, cure for every complaint; may be ſeen at large in my complete Edition of Culpeper's Family Phyſician, now publiſhed in weekly numbers, at Eight-pence each, or complete with the Appendix, in 2 vols. boards, Price 1l. 16s. plain, or with the plates moſt beautifully coloured, 3l.

ever

ever cauſe this flux is obſtructed, except in the ſtate of pregnancy, proper means ſhould be inſtantly uſed to reſtore it; and if exerciſe in a dry, open, and rather cool, air, wholeſome diet, cheerful company, and amuſement, fail, recourſe muſt be had to medicine. In all ſuch caſes blood-letting muſt be carefully avoided; but let the patient take from twenty to thirty drops of my Lunar Tincture, in a wine-glaſs of warm water or mugwort tea, every morning before breakfaſt, every day at noon, and every night before going to bed, until the intention be anſwered, which will uſually take place in three or four days, without the aſſiſtance of any other medicine whatever. But it ſometimes happens, in relaxed conſtitutions, that the menſtrual diſcharge, on its firſt appearance, is vitiated, and over abundant; the conſequence of which is that the patient becomes weak, the colour pale, the appetite impaired, and the digeſtion languid, ſo that dropſy or conſumption is likely to enſue. Effectually to prevent theſe, let the patient be kept two or three days in bed, with her head low, and obſerve a ſlender diet, principally of white meats, and her drink red port negus. Every night and morning for ten or twelve days, let her take one table-ſpoonful of the Solar Tincture, diluted in double the quantity of decoction of nettle-roots, or of the greater comfrey; and after the flux has abated, and her health and ſtrength ſeem to return, let her only take a table ſpoonful of the Solar Tincture every day at noon, in a glaſs of cold ſpring-water; which wonderfully contributes to reſtore a due conſiſtency to the circulating maſs, promotes digeſtion, and invigorates the

the ſpirits. Before the cuſtomary period returns, ſhe muſt diſcontinue the Solar Tincture; and, if there be the leaſt appearance of irregularity or obſtruction, let her again take, night and morning, for two or three days, from twenty to thirty drops of the Lunar Tincture in a glaſs of mugwort tea, and ſhe will quickly find a regular habit, and her health amazingly eſtabliſhed. In obſtinate or neglected caſes, where the menſes have feceded, and after an irregular appearance have turned wholly into the habit, both theſe Tinctures ſhould be uſed with a leſs ſparing hand, particularly under circumſtances in any reſpect ſimilar to the following remarkable

CASE.

Being called to the aſſiſtance of a young lady of fifteen years of age, I was informed her menſes had made an irregular appearance about five or ſix times, coming firſt with the full and then with the new moon, and afterwards at the diſtance of two or three months apart until they totally diſappeared, and turned back upon the habit. No notice was taken, until the patient was ſeized with a violent bleeding at the noſe, attended with fever and epileptic fits. After being under the care of an eminent phyſician for ſeveral months, who directed veneſection, and almoſt every cuſtomary application, to no kind of purpoſe, the diſorder fixed in her neck, forming a large tumour, the acrimony of which fell upon her lungs, and threw her into ſtrong convulſions. In this extremity I was ſent for. Perceiving the whole ſyſtem deranged by ſpaſmodic affec-

tions,

tions, and a locked jaw almoſt finally completed, my firſt object was to relieve the vital organs, by giving force and elaſticity to the circulating maſs. With this view I with difficulty forced the mouth ſufficiently open to adminiſter one table-ſpoonful of the Solar Tincture *undiluted;* and within half an hour, to the aſtoniſhment of her friends, I had the pleaſure of ſeeing every convulſive ſymptom die away, and of hearing the patient's voice, of which ſhe had been totally deprived for upwards of a week before. Two hours after, another ſpoonful of the Solar Tincture was taken with additional ſucceſs; and the patient afterwards continued this medicine in the quantity of a table-ſpoonful, in a wine-glaſs of warm water, three times a-day, for ſix days, at the expiration of which time her appetite and ſtrength were ſurpriſingly returned; and ſhe was then put under a regular courſe of the Lunar Tincture. Twenty drops, in a wine-glaſs of mugwort tea, were taken every night and morning for thirteen ſucceſſive days, and on the morning following, it being the full moon, with which her menſes originally came, ſhe had the conſolation to find that every obſtruction was removed, and that the due courſe of nature was completely re-eſtabliſhed. The glandular ſwellings gradually ſubſided, her natural complexion quickly returned, and ſhe now continues in blooming health, perfectly regular, free from all obſtructions, and from every conſequent complaint, thankful for the bleſſings of her recovery, and deſirous of communicating the means to any unfortunate female under ſimilar affliction; and to whom reference

ence may at any time be had, by application to the author.

CHLOROSIS, OR GREEN SICKNESS; by ſome called the LOVE-FEVER.

This diſeaſe uſually attacks virgins a little after the time of puberty, and firſt ſhews itſelf by ſymptoms of *dyſpepſia*, or bad digeſtion. But a diſtinguiſhing ſymptom is, that the appetite is entirely vitiated, and the patient will eat lime, chalk, aſhes, ſalt, &c. very greedily; while at the ſame time there is not only a total inappetence to proper food, but it will even excite nauſea and vomiting. In the beginning of the diſeaſe, the urine is pale, and afterwards turbid; the face becomes pale, and then aſſumes a greeniſh colour; ſometimes it becomes livid or yellow, the eyes are ſunk, and have a livid circle round them; the lips loſe their fine red colour; the pulſe is quick, weak, and low, though the heat is little ſhort of a fever, but the veins are ſcarcely filled; the feet are frequently cold, ſwell at night, and the whole body ſeems covered with a ſoft ſwelling; the breathing is difficult; nor is the mind free from agitation as well as the body; it becomes irritated by the ſlighteſt cauſes; and ſometimes the patients love ſolitude, and become ſad and melancholy. There is a retention of the menſes throughout the whole courſe of the diſorder; which eventually fix on the vital organs, and death enſues.

The above complaint indiſputably ariſes from ſtifling or ſuppreſſing the calls of nature at this vernal ſeaſon,

to

or juvenile ſpring of life, when the primary command of God, "*increaſe and multiply,*" is moſt ſenſibly impreſſed upon the whole human fabric. Every tube and veſſel appertaining to the genital ſyſtem, being now filled with a procreative liquor, excites in the female a powerful, yet perhaps involuntary, irritation of the parts, which ſtrongly ſolicits the means of diſcharging their load by venereal embraces. Theſe, from prudential motives, being often neceſſarily denied, the prolific tinctures ſeize upon the ſtomach and viſcera, pen back and vitiate the catamenia, choak and clog the perſpirative veſſels, whereby the venal, arterial, and nervous, fluids, become ſtagnant; and a leucophlegmatia, or white flabby dropſical tumour, pervades the whole body, and quickly devotes the unhappy patient to the arms of death. In this manner, I am ſorry to remark, are hundreds of the moſt delicate and lovely women plunged into eternity, in the very bloſſom of life, when female excellence is but budding forth, big with the promiſed fruit of rapture and delight! How much then does it become the duty of parents and guardians, who have daughters or wards in ſituations like theſe, and where no very groſs objection can ariſe, to ſuffer them to marry with the men they love, otherwiſe to provide ſuitable matches for them; ſince this will effect the moſt rational and moſt natural cure, by removing the cauſes of the complaint altogether. If, however, matrimony be not then convenient, nor likely, in a ſhort time, to take place, recourſe muſt forthwith be had to proper regimen, and phyſical aid, other-

wiſe delirium or conſumption will quickly enſue. The beſt method of regimen is laid down in my Family Diſpenſatory, page 217, which, if well obſerved, in addition to the following courſe, will generally perform a cure. Take leaves of mugwort, briony, and penny-royal, of each a handful; infuſe them four days in two quarts of ſoft water, and then pour off the clear liquor for uſe. Take a gill-glaſs three parts full, with thirty drops of the LUNAR TINCTURE added to it, three times a-day, viz. morning, noon, and night, till the decoction be all uſed. Then reduce the doſe to twenty drops of the Tincture in a wine-glaſs of cold ſpring water morning and evening, for fifteen days; after which it ſhould be taken only once a-day, or every other day, until the patient finds herſelf entirely free from every ſymptom of the diſeaſe. For this malady, it is the only ſpecific hitherto known; it unclogs the genital tubes, purges and cools the uterus and vagina, promotes the menſtrual diſcharge, cleanſes the urinary paſſages, diſſolves viſcid humours in the blood, ſharpens the appetite, ſtimulates the nerves, and invigorates the ſpirits, which in all ſtages of *chloroſis* are ſo apt to be depreſſed. When this diſorder is not very obſtinate, nor far advanced, let the patient take from twenty to thirty drops of the Lunar Tincture, in a wine-glaſs of cold ſpring-water for thirty or forty days ſucceſſively, and it will perform a cure without the trouble of preparing the decoction. In this malady, I have lately had the happineſs of completing an elegant cure, which I ſhall mention here, merely for the information

of

of ſuch unfortunate maids as may be languiſhing under the ſame deplorable circumſtances. The following is a literal ſtatement of the

CASE.

A young lady, turned of ſeventeen, had been afflicted with *chloroſis* almoſt three years. In the early part of the malady, ſhe conceived an unconquerable appetite for wood-cinders, concreted mortar, tobacco-pipes, ſealing-wax, &c. Her courſes appeared at different intervals of the diſeaſe, but always irregular, and more or leſs in a vitiated ſtate. About half a year preceding my attendance, this flux had totally ceaſed; but, upon the approach of every new moon, with which her menſes originally came, ſhe was afflicted with pains in the back and loins, heavineſs and turgidity about the region of the womb, and other cuſtomary ſymptoms of the catamenia; yet not the ſmalleſt ſhow could be brought to appear. A little before this, the lady's affections had been placed on a young man in the neighbourhood; but whoſe ſituation in life was by no means on a ſcale adapted to the views of her father and family. The moment therefore this attachment was diſcovered, the lady was confined to her apartment, and neither ſuffered to take exerciſe or freſh air, but when it ſuited for ſome truſty attendant to accompany her. This confinement heightened her diſeaſe, and brought on a ſettled melancholy, a ſallow complexion, dejected ſpirits, univerſal laſſitude, and waſting of the fleſh. The morbid ſtate of her body having undermined her conſtitution, without attracting either her own or

her father's care, the diſorder fell upon the vital organs, and with ſo rapid a progreſs, that within twenty-four hours ſhe was ſeized with an ardent fever, attended with loſs of appetite, delirium, and a total privation of ſpeech. In this ſhocking ſtate ſhe had the alternate advice of three phyſicians of the firſt reſpectability; but the diſorder increaſing, and putting on the moſt dangerous ſymptoms, after having baffled their utmoſt ſkill, a conſultation was had, and the miſerable patient was conſigned to the grave.

Under theſe deplorable circumſtances it was my lot to be called in; and, upon a cloſe examination of the patient, ſcarcely any viſible ſigns of life remained. The pulſe had nearly ſubſided. The action of the heart and lungs could ſcarcely be diſcerned. The eyes were ſunk, and fixed; yet retained an uncommon look of expreſſion and ſentiment. At this time ſhe had a large bliſter round her neck, another on the pit of her ſtomach; a third, very large, between her ſhoulders; a fourth on her head; a fifth, and ſixth, inſide the ancles and legs. Veneſection had been ſo often repeated, that ſcarce blood enough remained to ſupport the heat and action of the heart. In this exhauſted ſtate, I only adminiſtered three table-ſpoonfuls of the Solar Tincture, *undiluted,* at intervals of little more than an hour apart; and in the ſpace of four hours after, I had the heart-felt ſatisfaction of ſeeing the energy of the blood reſtored; pulſation gradually reſumed its action; the lungs were dilated; reſpiration become free; and a profuſe ſweat, which the Tincture induced, fortunately

nately opened the perſpiratory veſſels; and the patient began to give evident ſigns of eaſe and ſenſibility. Warm nouriſhing food was afterwards taken in ſmall quantities; and I was enabled to remove the bliſters, and perform the dreſſings without pain or torture to the languid patient. The Solar Tincture was now adminiſtered every day for ten days, in the quantity of a table-ſpoonful in a wine-glaſs of warm barley-water, three times a day, and once in the night, whenever watchfulneſs came on. About the middle of the ſeventh day, ſhe began to articulate, though not a word had been uttered for upwards of ſix weeks before; and on the tenth day, her voice and bodily functions were ſo far reſtored, that I deemed it ſafe to give her an interval of ſix days reſt, without any medicine whatever. I had the happineſs to find my expectations completely anſwered; for nature, aſſiſted by nouriſhing food, effected more than a profuſion of drugs; ſo that, in little more than twenty days, my patient was able to walk her room, and to put herſelf under a courſe of the Lunar Tincture. This ſhe perſiſted in, with nouriſhing diet, ſeconded by occaſional but very gentle airings in the carriage, for near a month longer; when, on the approach of the enſuing new moon, to the unſpeakable joy of her friends, the menſtrual flux reſumed its natural courſe: the comfort and relief of which was ſo viſible to the patient, that ſhe in an extacy exclaimed "*My ſufferings are at an end.*" This lady has ever ſince continued to improve in health and ſpirits in ſo ſurpriſing a degree, that, looking back on her late miſerable

ſerable and reduced ſtate of body, forms a contraſt ſo great as almoſt to exceed belief. Yet the lady and her worthy parent are at all times ready to authenticate the fact to any reputable enquirer, or to the friends of any unfortunate female labouring under a ſimilar affliction.

Of the FLUOR ALBUS, or WHITES.

The fluor albus, female weakneſs, or whites, as it is commonly called, is a diſeaſe of the womb and its contiguous parts; from which a pale-coloured, greeniſh, or yellow, fluid is diſcharged, attended with loſs of ſtrength, pain in the loins, bad digeſtion, and a wan ſickly aſpect. The quantity, colour, and conſiſtence, of the diſcharge, chiefly depend upon the time of its duration, the patient's habit of body, and the nature of the cauſe by which it was produced. Weakly women of lax ſolids, who have had many children, and long laboured under ill health, are of all the moſt ſubject to this diſagreeable diſeaſe; from which they unfortunately ſuffer more ſevere penance than others, as the niceſt ſenſations are often connected with ſuch a delicacy of bodily frame as ſubjects them to it. In Holland it is very frequent, and in a manner peculiar to the place, from the dampneſs of its ſituation; the ſurrounding air being ſo overcharged with moiſture as to relax the body, ſtop perſpiration, and throw it upon the bowels or womb; producing in the firſt a diarrhœa or flux, in the laſt the fluor albus or female weakneſs. The diſcharge often proceeds from the veſſels ſubſervient

vient to menſtruation; becauſe, in delicate habits, where thoſe veſſels are weak, and conſequently remain too long uncontracted, the fluor albus ſometimes immediately follows the menſes, and goes off by degrees as they gradually cloſe. It alſo comes from the mucous glands of the womb, as is particularly evident in very young females of eight or ten years old; in whom, though very rarely, it has been obſerved, and where it muſt then neceſſarily have eſcaped from thoſe parts, as the uterine veſſels are not ſufficiently enlarged for its paſſage at ſo early a period.

Sometimes as in women with child, it proceeds from the paſſage to the womb, and not from the womb itſelf; which, during pregnancy, is cloſely ſealed up, ſo that nothing can paſs from thence till the time of labour. The application of thoſe inſtruments called peſſaries, from the pain and irritation they occaſion, are alſo apt to bring on this diſcharge. The fluor albus has been ſuppoſed to ſupply the want of the menſes; becauſe, where the firſt prevails, the laſt are generally either irregular or totally wanting: but it might more properly be ſaid, that the preſence of the fluor albus, which is a preternatural evacuation, occaſions the abſence of that which is natural; as is evident from the return of the menſes after the fluor albus has been cured. Indeed, when this diſcharge appears about the age of thirteen or fourteen, and returns once a-month, with ſymptoms like thoſe of menſes, then it may be deemed ſtrictly natural, and there-

fore

fore ought not to be ſtopped. The fluor albus may be diſtinguiſhed into two kinds. The firſt ariſes from a ſimple weakneſs, or the relaxation of the ſolids; which may either be general, where the whole bodily ſyſtem is enervated and unſtrung; or partial, where the womb only is affected, in conſequence of hard labour, frequent miſcarriages, a ſuppreſſion or immoderate quantity of the menſes, or a ſtrain of the back and loins. In the firſt caſe, the diſcharge being generally mild, may be eaſily taken away. In the ſecond, it may proceed a vitiated or impure blood, where the body, from thence, is loaded with groſs humours, which nature for her own ſecurity and relief thus endeavours to carry off. In ſuch caſes the diſcharge is often of a reddiſh colour, like that from old ulcerous ſores; being ſometimes ſo ſharp as to excoriate the contiguous parts, and occaſion a ſmarting and heat of urine. A deep-ſeated darting pain with a forcing down, attending ſuch a diſcharge, is a very dangerous and alarming ſign, and indicates an ulcerated or cancerous womb. This malignant ſtate of the diſeaſe, if of long continuance, is extremely difficult of cure; and diſpoſes the patient to barrenneſs, a bearing down, dropſy, or conſumption. In ſhort, as this is a malady of the moſt diſagreeable kind, which by long continuance or neglect becomes difficult of cure, and often proves fatal, it were to be wiſhed that women, on ſuch occaſions, would be more attentive to their own ſafety, by uſing all poſſible means in due time to prevent the diſorder.

As women are ſometimes connected with thoſe who do not conſcientiouſly regard their ſafety, it is a circumſtance

cumſtance of the utmoſt conſequence to diſtinguiſh a freſh venereal infection from the fluor albus or whites; for, if the firſt be miſtaken for the laſt, and be either neglected or improperly treated, the worſt conſequences may ariſe. In addition therefore to what I have ſtated in page 219 of my Family Diſpenſatory, the following ſigns will ſerve to inform the patient whether there be occaſion for her doubts or not. A freſh infection, called gonorrhœa, is malignant and inflammatory; the fluor albus moſt commonly ariſes from relaxation and bodily weakneſs: and therefore the remedies proper in the firſt diſorder would render the laſt more violent, by locking up and confining the infectious matter. In the gonorrhœa, the diſcharge chiefly proceeds from the parts contiguous to the urinary paſſage, and continues whilſt the menſes flow: but in the fluor albus it is ſupplied from the cavity of the womb and its paſſage, and then the menſes are ſeldom regular. In the gonorrhœa, an itching, inflammation, and heat of urine, are the fore-runners of the diſcharge; the orifice of the urinary paſſage is prominent, and the patient is affected with a frequent irritation to make water. In the fluor albus, pains in the loins and loſs of ſtrength attend the diſcharge; and, if any inflammation or heat of urine follow, they happen in a leſs degree, and only after a long continuance of the diſcharge, which, becoming ſharp and acrimonious, excoriates the ſurrounding parts. In the gonorrhœa, the diſcharge ſuddenly appears, without any evident cauſe; but in the fluor albus, it

comes on more ſlowly, and is often produced by irregularities of the menſes, frequent abortion, ſtrains, or long-continued illneſs. In the gonorrhœa, the diſcharge is greeniſh or yellow, leſs in quantity, and not attended with the ſame ſymptoms of weakneſs. In the fluor albus, it is alſo often of the ſame colour, eſpecially in bad habits of body, and after long continuance; but is uſually more offenſive, and redundant in quantity. The whites often afflict maids of a weakly conſtitution, as well as married women and widows; and indeed there are few of the ſex, eſpecially ſuch as are ſickly, who have not known it more or leſs. For whatever diſeaſe renders the blood poor, foul, or viſcous, and reduces a woman to a languid condition, is commonly ſucceeded by the whites, which when they come in this manner, continue to weaken the body more and more, and are in great danger, without ſpeedy remedy, of wearing away the patient, and making her a miſerable victim to death. Let no woman, therefore, neglect this diſorder, when ſhe finds it on her, but endeavour to obtain an immediate cure. The regimen and general management are pointed out in the Medical Part of my Engliſh Phyſician, page 220; but, in lieu of all other medicines, make a decoction of tormentil-root, biſtort, comfrey, and red-roſe leaves; take a gill-glaſs three parts full, and add to it thirty or forty drops of the Lunar Tincture, which muſt be perſiſted in morning, noon, and night, for ten days; then take it morning and evening only for ten days more; after which diſcontinue the decoction, and take the

Tincture

Tincture every morning for a month, twenty drops in a wine-glaſs of cold ſpring-water: the diſeaſe will be found gradually to abate: and, upon any ſymptoms of a return of it, take fifteen to twenty drops of the Tincture in a wine-glaſs of cold water every morning for a week, and it will go entirely off; as hath been verified in a great number of patients, who are ready to teſtify that they owe their cure, even in the moſt obſtinate caſes, entirely to the Lunar Tincture.

Of BARRENNESS, or INFERTILITY.

Barrenneſs is ſuch a ſtate of a woman's body, as indiſpoſes it, upon the uſe of the natural means, to conceive and propagate her ſpecies. This proceeds from many ſources, which may be reduced to theſe two general heads: Firſt, An indiſpoſition of the parts to receive the male ſemen in the act of copulation, or that vital effluvium ſtreaming from it, which alone can impregnate the ovaria. Secondly, An inaptitude in the blood to retain and nouriſh the vital principle after it is communicated, ſo as to make it grow and expand its parts, till it becomes a proper fœtus. Conception is alſo hindered by a hectic, hydropic, or feveriſh, ſickly habit; by a deficiency or obſtruction of the monthly courſes, which impoveriſhes the fluids; by the whites, which, continuing too long relax the glands of the womb, and drown, as it were, the prolific particles; and too often by a *vice*, which utterly deſtroys the tone and vigour of the parts; as is fully exemplified in my Family Diſpenſatory, page 221. Preparatory to the

cure of infertility, it is proper to uſe evacuations, unleſs any particular ſymptom ſhews them to be dangerous. Bleeding, lenient purgatives, ſuch as the ſolutive electuary, and a gentle vomit of ipecacuanha, eſpecially if the perſon be plethoric or cacochymic, cannot but be of great ſervice; then proceed with the following ſtrengthening electuary: Take roots of ſatyrion or eringo candied, of each one ounce; powder of cinnamon, ſweet-fennel ſeeds, and preſerved ginger, of each half an ounce; mace, roots of contrayerva and Spaniſh angelica, of each one drachm; troches of vipers, one ounce; juice of kermes, ſix drachms; tincture of cantharides, half a drachm; ſyrup of cloves, a ſufficient quantity to make an electuary. Let the quantity of a large nutmeg be taken every morning early, at about five o'clock every afternoon, and at night going to bed; and immediately after taking the electuary, drink a wine-glaſs full of the following infuſion, adding to it from twenty to thirty drops of the Lunar Tincture, viz. take cinnamon powdered one ounce; of ſweet fennel-ſeeds bruiſed, and lavender-flowers, of each half an ounce; Spaniſh angelica-root, ginger, contrayerva, mace, and cochineal, of each one drachm and a half; Canary-wine, two quarts: infuſe according to art for two or three days, and ſtrain off the infuſion for uſe. Continue the electuary for ten days ſucceſſively; then omit a week, and continue it for ten days more; after which continue the infuſion and Tincture only, three times a-day, for ten days more: then take it only twice a-

day

day for a month, or as long as the caſe requires, adding from fifteen to thirty drops of the Tincture to each glaſs, as the age or conſtitution of the patient may require. This courſe will be found moſt excellent for barrenneſs and debility; particularly while thus aſſiſted by the Lunar Tincture; which will greatly warm and rectify the blood and juices, increaſe the animal ſpirits, invigorate and revive the whole human machine, and not only raiſe the appetite to venereal embraces, but remove the uſual impediments to fertility; prepare the womb for performing its office, and the ova for impregnation. The Tincture warms, comforts and excites, the generative parts to admiration, and ſeldom fails of curing all common occaſions of barrenneſs, in a month or ſix weeks, if duly followed; as a proof of which I beg leave to add the pleaſing circumſtances of the following ſingular

CASE.

A young lady of rank and fortune, but of a delicate frame, entered into the marriage-ſtate about four years ago. Inſtead of deriving from it that bliſsful gratification which gives the honoured name of mother, ſhe became weak, languid, pale, and melancholy. The whole nervous ſyſtem was relaxed,—the natural functions of the body were ſuſpended,—œdematous tumours obſtructed the ſanguiferous paſſages, whence incurable barrenneſs, and lingering conſumption, were the ſad proſpects left in view. In this melancholy ſtate of body and mind, by advice of her phyſician, when all hopes were at an end, ſhe

ſhe was put under a regular courſe of the Lunar Tincture, which, to the aſtoniſhment of all, gradually deterged the obſtructed veſſels—propelled the animal juices through the ſyſtem—ſtrengthened and braced the nerves—induced a regular habit—reſtored the ſparkling eye and blooming cheek, and gave new vigour to the animal functions; the reſult of which has been, that before the end of the enſuing year, after her health was recovered, the lady became the happy mother of a SON and HEIR, to the inexpreſſible joy of an affectionate huſband and a ſympathiſing family.

INDISPOSITIONS ATTENDANT ON PREGNANCY.

Though pregnancy is not a diſeaſe, but rather a natural alteration of the animal œconomy, which every female is formed to undergo, yet it is attended with a variety of complaints, which require great attention; but for the cure or alleviation of which, medical aid has proved very deficient. In theſe complaints, however, the Lunar Tincture exerts moſt extraordinary properties, and excels whatever has been heretofore offered under a medical form. It is an univerſal purifier of thoſe heterogeneous particles, which, paſſing through the blood, produce nauſea, and ariſe from the combining efforts of the maſculine and feminine tinctures; from whence, according to the groſſneſs of the procreative fluids at the time of conception, proceed vomiting, pains in the head and ſtomach, fainting, &c.

&c. occaſioned by the jarring elements ariſing from the frequent diſproportion in the heat and active principle of the conſtituent parts of the ſeminal fluid; which is not only attended with great debility and and depreſſion to the mother, in her whole nervous ſyſtem, but often with hereditary diſeaſes, and dreadful conſequences to the infant offspring. Indeed ſo great has been the conflict of the male and female procreative tinctures for the maſtery or predominant power, while paſſing through the circulating maſs or habit of the mother, that the moſt curious and aſtoniſhing phenomena have, on many occaſions, been obſerved to reſult from it. In a ſmall village in Somerſetſhire, in the year 1759, a girl was born with the hair on her head of two remarkably diſtinct colours; the right ſide, from an exact parallel line, which divided the ſkull into two equal parts, was almoſt black; but the left ſide, from the ſame line, was of a reddiſh yellow. As ſhe grew up, the dark hair became of a jet black, exactly like that of her father; whilſt the other became of a ſtrong carroty red, preciſely reſembling that of her mother; and, after the age of puberty, the hair on the privities, and under the arm-pits, as well as on her arms and legs, was diverſified in the ſame manner; that on the right ſide, all the way down, being black; whilſt that on the left was entirely red. The young woman lived till the 28th year of her age, and was reſorted to as a great curioſity.

Another well-known yet remarkable inſtance of this conflict of the male and female procreative tinctures at the

the time of conception, was the caſe of a man who a few years ſince kept a public-houſe in Tooley-ſtreet, Southwark. His father was a white man, belonging to one of the Weſt-India packets; and his mother was a negro girl, whom he had taken a fancy to, and purchaſed on the arrival of one of the Guinea ſlave-ſhips at the iſland of Jamaica. He brought her with him to London, and in the courſe of the enſuing year ſhe was delivered of a ſon, the whole right ſide of which was white like the father; but the whole of the left ſide was black like the mother. As he grew up, this viſible diſtinction became more ſtrongly marked; and during the time he kept the above public houſe in Tooley-ſtreet, he was reſorted to by an immenſe concourſe of people, who flocked there to ſpend their mite, in order to be ſatisfied that ſo great a curioſity really exiſted. The whole of his body appeared to be interſected by an exact parallel line, by which the efforts of conception ſeem to have united the male and female tinctures in preciſe equilibrio, without ſuffering them to intermix in coagula, or in impregnating and expelling the ovum from the ovaria to its ſuſpended ſtate in the uterus. Hence the hair on the right ſide was long and brown, like that of the father, and half the face, neck, body, and privities, with the arm, thigh, leg, and foot, on the right ſide, were white; while the correſponding parts on the left ſide were black, like that of the mother, with half the hair on the privities and head black and woolly, exactly like that of a true negro.

A ſtill

A ſtill more curious and ſtriking example of this aſtoniſhing effort in the male and female procreative fluids, is verified in the caſe of Mr. John Clark, of Preſcot-ſtreet, Goodman's-fields. His father was a native of Africa, who, by dint of good fortune, had amaſſed a conſiderable ſum of money, and ſettled in London. He married a remarkably healthy young woman, a native of Devonſhire, who had been ſome time his ſervant. By her he had two ſons and three daughters, who were mulattos, except the eldeſt ſon, who was the firſt born, and the perſon above alluded to. From the head to the navel, all round his body, he was remarkably fair, had a fine ſkin, handſome round features, light-brown hair, and ſanguine complexion, like his mother; but from the navel downwards he was completely black, with ſhort black woolly hair on the privities, exactly like the father. At the age of thirty, he married a young lady of good family and fortune, but of a delicate conſtitution. For near three months he had the addreſs to conceal this deformity of colour from the knowledge of his wife, by wearing fleſh-coloured ſilk drawers and ſtockings, which he pretended were lined with flannel to keep off the rheumatiſm, with which he had been ſorely afflicted, even to a degree that endangered his life, every time he attempted to leave them off. It happened however, from ſome neglect of concealment before going to ſleep, that the curioſity of his wife was ſtrongly excited; and the opportunity proving favourable in other reſpects,

it being quite day-light in the morning, and her huſband faſt aſleep, ſhe eagerly proceeeded to ſatisfy her doubts. Gently turning down the bed-clothes, and removing the other impediments in the way of a complete inſpection, ſhe no ſooner diſcovered the real ſtate of things, than ſhe ſhrieked out vehemently, and fainted away! The huſband, thus ſuddenly awaked, beheld his wife in a fit, and ſaw with ſorrow and regret the conſequences of a diſcovery which entirely reſulted from his own neglect. He immediately aroſe, called up the ſervants, and procured medical aſſiſtance with all convenient ſpeed; but in vain—the ſudden ſurpriſe, added to the mortification and terror of mind, had ſo powerful an effect, that the lady died in convulſions, about two months gone with child. I have often lamented that fortune did not throw me in the way at this critical juncture, for two reaſons; in the firſt place I have the vanity to think I could have ſaved the patient's life; but, had I failed in that, I would have perſuaded Mr. Clark, from motives of philoſophical ſpeculation, and for the improvement of medical ſcience, to have ſuffered me to open the womb of this unfortunate lady, in order to extract the fœtus; which, under the circumſtances of the uncommon conformation of the father, might have enabled me to throw a new light on this very curious ſubject of occult enquiry, perhaps ſo as to have accounted more obviouſly for the jarring conflicts and ſtruggling efforts of the maſculine and feminine tinctures; to which alone we are

to

to look for the information of hermaphrodites, the production of monſters, &c.*

Sympathy and antipathy moſt certainly operate very powerfully on females in the early ſtate of pregnancy, and might, as was then ſuggeſted, have had a principal ſhare in carrying off the above unhappy patient, while no means were uſed to counteract their influence on the maſs of blood. Sudden frights, longing and loathing, and all marks on the fœtus, are obviouſly derived from this cauſe, and can only be corrected by giving energy and ſtimulus to the circulating ſyſtem, whereby the functions both of body and mind are ſtrengthened, and

* We find many ſimilar accounts in different authors, of party-coloured people. Thus we are told, by Buffon and others, that copulation of a black man with a white woman hath often produced a pied or ſpotted race, living inſtances of which are to be found in both the Indies. A very remarkable caſe is that of Maria Herig, who was ſpotted all over the body, and covered with hair, like the leopard. She was born at Dackſtull in Lorraine in 1770, and was exhibited in Paris in 1774. Both the ſkin and the hair were of a tan-colour; and beſides theſe hairy ſpots, her ſtomach and belly were covered with longiſh hair, of a brown colour on one ſide, and lighter on the other.—Somewhat ſimilar, and not leſs remarkable, was the porcupine man, who was born in Suffolk in 1710, and was exhibited in every principal town in England. The ſkin of his body was covered with excreſcences like thorns or prickles; and about the thickneſs of packthread. His face, the palms of his hands, and the ſoles of his feet, were the only parts that were free from them. They were of a reddiſh brown, and had ſuch a degree of hardneſs and elaſticity, as to rattle when the hand was moved over the body. They were half an inch long in ſome parts, and ſhorter in others. They did not appear till two months after his birth; but, what is moſt extraordinary, they dropped off every winter, and were renewed in the ſpring. He had ſix children, all of whom, like their father, were covered with theſe excreſcences.

the nervous fluid fortified and protected againſt the ſudden impreſſion of external objects. It ſeems to be admitted by the moſt eminent practitioners, that the diſeaſes incident to a pregnant ſtate in the early months ariſe from ſympathy; whilſt thoſe peculiar to the more advanced ſtages of geſtation are produced by the ſtretching and preſſure of the uterus on the contiguous viſcera. Thus heart-burn and diarrhœa, tenſion and pains of the breaſt, nauſea and head-ach, deſire of unnatural food, tremors, and dejected ſpirits, fainting and hyſteric fits, premature menſtruation, and conſequent abortion, proceed from the firſt of theſe cauſes; while coſtiveneſs, ſtranguary, cramp, and cholic, appear to reſult from the other. And though the celebrated Dr. Stahl, Dr. Cullen, and others, have ſo much differed as to the theory of theſe diſeaſes, yet they all agree that gentle opiates, aromatic infuſions, ſtrengthening bitters, and medicines calculated to give energy to the languid ſtate of the circulation, and to purify the groſs and viſcid elements which oppreſs the ſtomach and viſcera, are the only proper remedies to be adminiſtered. Now the Lunar Tincture poſſeſſes the aromatic and aſtringent virtues in an admirable degree; and is elegantly adapted to invigorate and aſſiſt the active faculties of nature, in expelling all viſcid humours from the ſtomach and bowels; and being compounded of the moſt ſubtle and occult elements, which preſerve the vital principle, it hence produces the moſt ſalutary effects on all women in a ſtate of pregnancy, by ſtimulating the procreative faculty to the formation

of

of the fineſt children; correcting and purifying the procreative fluid from infection or diſeaſe; preventing moles or falſe conceptions, removing all loathings, longings, or vomiting, and effectually preventing abortion, from any cauſe whatever. For theſe reaſons, when a woman enters into a ſtate of matrimony, ſhe would do well to take twenty drops of the Lunar Tincture every other morning to promote conception; ſhe ſhould then continue it three times a-week, from conception to the end of the fourth month; then it might be omitted till a fortnight before her time, when ſhe ſhould take twenty drops in a wine-glaſs of cold ſpring-water, every morning till her labour, at which time it will wonderfully ſtrengthen her, aſſiſt her throws, facilitate the birth, promote the lochia, and carry off the after-pains. She might take it occaſionally during the month, in any ſymptoms of cold, fever, or hyſterics, diluted in a wine-glaſs of warm barley-water, about the middle of the day.

Women, ſubject to miſcarriages, ſhould never fail to take this medicine, from the time they have reaſon to believe they are pregnant, until a full month after they have quickened. It may be taken once, twice, or thrice, a-day, or every other day, as the urgency of the caſe may require, from twenty to thirty drops, in a glaſs of forge water; or in ſoft ſpring-water, in which common oak-bark has been ſteeped; and ſhe will effectually get over all cauſes of abortion. Women after ſudden miſcarriages, or bad labours, will

find

find wonderful relief by taking twenty drops of it in a wine-glaſs of warm barley-water, for a week or ten days. Nurſes, alſo, whoſe milk is griping, or defective, ſhould take it once or twice a-day, or as often as occaſion may require. The intention will quickly be experienced, the milk will be purified and augmented, and all the fluid ſecretions promoted in a manner productive of ſound health, both to the mother and child. In caſes were œdematous ſwelling of the legs and labia are occaſioned by the interruption of the refluent blood from the preſſure of the diſtended uterus on the vena cava; in violent floodings; in nervous ſpaſms; in epileptic fits, and in obſtinate convulſions, where the *vis vitæ* muſt be ſupported by repleniſhing the veſſels with the utmoſt ſpeed; recourſe ſhould be had to the Solar Tincture, which in the moſt dangerous caſes has been found to give immediate relief; and, if duly perſiſted in, will ſcarcely ever fail to effect a cure.

STATE OF WOMEN AT THE TURN OF LIFE.

The moſt critical and dangerous time of a woman's life is that wherein the menſes ceaſe to flow, which uſually happens between forty and fifty years of age. The great change that this produces, by ſo copious a drain being turned into the habit without previous preparation, is the ſole cauſe of its danger. Every woman muſt be more or leſs ſenſible when this period arrives, and ſhould conduct herſelf accordingly; for, when the menſes are about to go off, they appear for the moſt part irregularly, both in time and quantity, once in a fortnight, three, five, or ſix, weeks; ſometimes

times very ſparingly, and at other times in immoderate quantities. For want only of neceſſary care and attention, during the time that the menſes thus give ſymptoms of their departure, many and various are the complaints that enſue; amongſt which are cold chills, ſucceeded by violent fluſhings of the face, and heats of the extremities; reſtleſs nights, troubleſome dreams, and unequal ſpirits; inflammations of the bowels; ſpaſmodic affection; ſtiffneſs in the limbs, ſwelled angles, ſore legs, with pains and inflammation; the piles, and other ſymptoms of plenitude. But all this might eaſily be prevented, by attending to a due regimen, and taking theſe tinctures, as occaſion may require. Whenever a woman has reaſon to ſuſpect her menſes are about to leave her, let her loſe four, five, or ſix, ounces of blood, as her habit of body will admit; then let her make a decoction, by taking gentian-roots, one pound; ſenna and orange-peels, of each half a pound; pour upon them a gallon of hot water, and, after it has ſtood twenty-four hours, pour off the liquor for uſe. Let her take from twenty to forty drops of the Lunar Tincture in a gill-glaſs full of the above decoction, every night and morning for ten days; then let her continue it every morning for ten days more, and afterwards once every two or three days, or oftener if the terms are of an ill colour and ſcent, until they are corrected. This courſe muſt be followed every ſpring and fall, for a month or ſix weeks ſucceſſively, by all women who find their menſes come irregularly, or too ſparingly,

ringly, until they entirely ceaſe; after which let the patient put herſelf under a courſe of the Solar Tincture for a month or ſix weeks, taking one ſpoonful in a wine-glaſs of warm water every night and morning for a week: then let it be taken only once a-day, in cold water, for the reſidue of the time; and if ſhe take, occaſionally, two table-ſpoonfuls of the Solar Tincture, diluted in a tumbler of warm water, as a beverage after dinner or ſupper, inſtead of wine or brandy and water, it will be productive of great benefit in eſtabliſhing a healthful ſtate of her blood, and carrying off the viſcid humours generally produced by the menſtrual flux returning into the habit.

Should it at this time happen, which it often does, that the terms flow too abundantly and produce a flooding, the patient muſt immediately loſe ſix or eight ounces of blood, and be kept as much as poſſible at reſt, with her head low, until the medicine has had time to take effect; let her diet be ſpare, but not too lax; and let her apply to the following courſe: Take conſerve of red roſes, marmalade of quinces, juice of kermes, candied nutmegs, ſyrup of quinces, and ſyrup of coral, of each half an ounce; aromaticum roſatum, and aſtringent ſaffron of iron, of each two drams; oil of cinnamon, ſix drops; mix into an electuary, (which might be made up by any apothecary, if the receipt be ſent him,) and take the quantity of a large nutmeg every day at noon for ſix, eight, or ten days, or longer, as the urgency of the caſe may require, drinking immediately

mediately after it twenty drops of the Lunar Tincture in a wine-glaſs of warm water; the flooding, by this means, will gradually abate, the feveriſh ſymptoms will go off, the back will be ſtrengthened, the womb-veſſels cleanſed, and the patient wonderfully reſtored. After the tenth day, in moſt caſes, the electuary might be diſcontinued; and the Lunar Tincture ſhould then be taken every morning for a month, from fifteen to twenty drops, according to the conſtitution of the patient; by which time the parts will be braced, comforted, and coiled up; ſo as to fear no danger of a relapſe. About a month after, let her undergo a courſe of the Solar Tincture, for the purpoſe of rectifying and ſtimulating the maſs of blood; this ſhould be taken for a month; a table-ſpoonful night and morning in a wine-glaſs of cold ſpring-water for the firſt ten days: and then once a day only for the reſidue of the time; the good effects of which will be ſenſibly and quickly felt.

The intention of nature in returning this flux back into the habit, is to nouriſh and preſerve life, not to deſtroy it. Until the age of pubertv, girls require this blood for the ſuſtentation and nouriſhment of their bodies; when that is ſufficiently eſtabliſhed, it is applied to the purpoſes of nouriſhing the fœtus, and of ſuckling the infant after it is born. When child-bearing ceaſes, and the eve of life comes on, this blood is returned back, to comfort and preſerve it; therefore, if women were but careful to obſerve a regular courſe before this flux returns upon them, by

adopting the methods I have prescribed, and by taking the medicine spring and fall for two or three years previous to the time, they might not only escape the dangers attendant on this period, but would lay the foundation of a settled state of health, and enjoy a sound constitution of body to extreme old age.

Of MASCULINE or SOLAR DISEASES.

Solar diseases are all such as proceed from a hot and dry cause, or have their origin in the blood and lymph. For as the beams flowing from the sun are the fountain of life and heat to the great world, or universal system of nature, so the blood, flowing from the heart, is the fountain of life and heat to the little world, or universal system of *microcosm*, or body of man. And again, as the stream of rays from the sun regulates the seasons, and produces the variety of climates, so the stream of blood in man's body, as affected by the sun, regulates and diversifies the form and figure of the whole race of human beings. As seasons and climates are subject to the external elements, which are still governed by the superior influence of the sun, so are they rendered either mild, healthful, and productive; or turbulent, pestilential, and barren. Just so the whole circulating mass is affected by change of climates and seasons, and by all the variations and agitations of the external elements; and hence diseases are induced in the blood, and are either mild, ardent, or acute, in proportion as the sanguiferous fluid becomes distempered and impaired by the action of the ambient, or contiguous

contiguous atmoſphere. Thus we perceive the ſolar influence on the human frame, and diſcover that the origin of diſeaſe is in the blood; for no longer than this vital ſtream is kept in due circulation, pure, and uncontaminated, can animal life be ſuſtained, or the body preſerved in health and vigour.

From the expreſs words of ſcripture, Levit. xvii. 11, 14. Deut xii. 23. we are warranted to infer, that "*in the BLOOD is the LIFE;*" and there is not a doubt but the living principle of the blood conſtitutes the life of the body. Of this opinion was the celebrated Hervey, as well as many of the ancient philoſophers and phyſicians; and the late Mr. John Hunter declared himſelf to be of the ſame way of thinking. We find the blood unites living parts, in ſome circumſtances, as certainly as the yet recent juices of the branch of one tree unite it with that of another. Were either of theſe fluids to be conſidered as extraneous or dead matters, they would act as ſtimuli, and no union would take place in the animal or vegetable kingdoms. This argument Mr. Hunter eſtabliſhed by the following experiment. Having taken off the teſticle from a living cock, he introduced it into the belly of a living hen. Many weeks afterwards, upon injecting the liver of the hen, he injected the teſticle of the cock likewiſe, which had come in contact with the liver, and adhered to it. In the nature of things, there is not a more intimate connection between life and a ſolid than between life and a fluid. For, although we are more accuſtomed to connect it with the one than the other,

yet the only real difference which can be ſhewn between a ſolid and a fluid is, that the particles of the one are leſs moveable among themſelves than thoſe of the other. Beſides we often ſee the ſame body fluid in one caſe and ſolid in another. The blood will alſo become vaſcular like other living parts. Mr. Hunter affirms, that, after amputations, the coagula in the extremities of arteries form veſſels, and may be injected by injecting theſe arteries; and he had a preparation by which he could demonſtrate veſſels riſing from the centre of what had been only a coagulum of blood, and opening into a ſtream of circulating blood. If blood be taken from the arm, in the moſt intenſe cold which the human body can bear, it raiſes the thermometer to the ſame height as blood taken in the moſt ſultry heat. This is a ſtrong proof of the blood's being alive; for living bodies alone have the power of reſiſting great degrees both of heat and cold, and of maintaining in almoſt every ſituation, while in health, that temperature which we diſtinguiſh by the name of animal heat. Blood is likewiſe capable of being acted upon by a ſtimulus; for it coagulates from expoſure, as certainly as the cavities of the abdomen and thorax inflame from the ſame cauſe. The more it is alive, that is, the more the animal is in health, it coagulates the ſooner on expoſure; and the more it has loſt of its living principle, as in the caſe of violent inflammations, the leſs it is ſenſible to the ſtimulus produced from its being expoſed, and it coagulates the later. We may likewiſe obſerve, that the

blood

blood preſerves life in different parts of the body. When the *nerves* going to any part are tied or cut, the part becomes paralytic, and loſes all power of motion? but it does not mortify. If the *artery* be cut, the part dies, and mortification enſues. What keeps it alive in the firſt caſe? nothing but the living principle, which alone can keep it alive; and this phenomenon is inexplicable on any other ſuppoſition, than that the life is contained in the blood. Another argument is drawn by Mr. Hunter from a caſe of a fractured os humeri. A man was brought into St. George's Hoſpital for a ſimple fracture of the os humeri or arm, and died about a month after the accident. As the bones had not united, Mr. Hunter injected the arm after death. He found that the cavity between the extremities of the bones was filled up with blood which had coagulated. This blood was become vaſcular, or full of veſſels. In ſome places it was very much ſo. He does not maintain that all coagulated blood becomes vaſcular; and indeed the reaſon is obvious: for it is often thrown out and coagulated in parts where its becoming vaſcular could anſwer no end in the ſyſtem: as for example, in the cavities of aneuriſmal ſacs. If it be ſuppoſed, that, in ſuch caſes as that juſt now mentioned, the veſſels are not formed in the coagulum, but come from the neighbouring arteries, it is equally an argument that the blood is alive: for the ſubſtance into which veſſels ſhoot muſt be ſo. The very idea, that ſuch a quantity of dead matter as the whole maſs of blood circulates in a living body, is abſolutely abſurd.

Thoſe

Thoſe who have ventured to oppoſe this doctrine, and the evidence of ſcripture with it, conſider the brain and nervous ſyſtem as the fountain of life; and that, ſo far from receiving its life from the blood, the nervous ſyſtem is capable of inſtantaneouſly changing the craſis of the blood, or any other animal fluid; and though the nervous ſyſtem cannot continue its action for any length of time, if the action of the blood-veſſels is ſuſpended, yet the heart and blood-veſſels cannot act for a ſingle moment without the influence of the nervous fluid. For this reaſon, ſay they, it is plain we muſt ſuppoſe the nervous ſyſtem, and not the blood, to contain properly the life of the animal, and conſequently to be the principal vital organ. The ſecretion of the vital fluid from the blood by means of the brain, is, by the ſupporters of this argument, denied. They ſay, that any fluid ſecreted from the blood muſt be aqueous, inelaſtic, and inactive; whereas the nervous fluid is full of vigour, elaſtic, and volatile in the higheſt degree. The great neceſſity for the circulation of the blood through all parts of the body, notwithſtanding the preſence of the nervous fluid in the ſame parts, they ſay is, becauſe ſome degree of tenſion is neceſſary to be given to the fibres, in order to fit them for the influx of the nervous fluid; and this tenſion they receive from the repletion of the blood-veſſels, which are every where diſperſed along with the nerves.

To follow this opinion through every argument would prove tedious and unneceſſary, as the following

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ſhort obſervations will decide the matter abſolutely againſt the patrons of the nervous ſyſtem. In the firſt place, then, if we can prove the life of the human body to have been communicated from a fluid to the nervous ſyſtem, the analogical argument will be very ſtrongly in favour of the ſuppoſition that the caſe is ſo ſtill. Now that the caſe once was ſo, is moſt evident; for the human body, as well as the body of every other living creature, in its firſt ſtate, I have ſhewn to be a gelatinous maſs, without muſcles, nerves, or blood-veſſels. Nevertheleſs, this gelatinous matter, even at that time, contained the nervous fluid. Of this there can be no doubt, becauſe the nerves are formed out of it, and have their power originally from it; and what is remarkable, the brain is obſerved to be that part of the animal which is firſt formed. Of this gelatinous or procreative fluid we can give no further account than that it is the nutritious matter from which the whole body appears to be formed. At the original formation of man and other animals, therefore, the nutritious matter was made the ſubſtratum of the whole body, conſiſting of muſcles, nerves, blood-veſſels, &c. nay more, it was the immediate efficient cauſe of the nervous power itſelf. Again, in the formation of the embryo, we ſee a vital principle exiſting as it were at large, and forming to itſelf a kind of regulator to its own motions, or a habitation in which it chooſes to reſide, rather than to act at random in the fluid. This habitation, or regulator, is undoubtedly the nervous ſyſtem; but at the ſame time, it is no leſs evident that

a nutritious fluid is the immediate origin of theſe ſame nerves, and of that very nervous fluid. Now we know that the fluid which in the womb nouriſhes the bodies of all embryo animals is neceſſarily equivalent to the blood which nouriſhes the bodies of adult ones; and conſequently, as ſoon as the blood became the only nutritious juice of the body, at that ſame time the nervous fluid took up its reſidence there, and from the blood diffuſed itſelf along the nerves, where it was regulated exactly according to the model originally formed in the embryo. Perhaps it may be ſaid, that the vital power, when once it hath taken poſſeſſion of the human or any other body, requires no addition or ſupply, but continues there in the ſame quantity from firſt to laſt. If we ſuppoſe the nervous power to be immaterial, this will indeed be the caſe, and there is an end of reaſoning upon the ſubject; but, if we call this power a volatile and elaſtic fluid, it is plain that there will be more occaſion for recruits to ſuch a power than to any other fluid of the body, as its volatility and elaſticity will promote its eſcape in great quantities through every pore of the body. It may perhaps be objected, that it is abſurd to ſuppoſe the blood capable of putting matter in ſuch a form as to direct its own motions in a particular way: but even of this we have a poſitive proof in the caſe of the electric fluid. For if any quantity of this matter has a tendency to go from one place to another where it meets with difficulty, through the air for inſtance, it will throw ſmall conducting ſubſtances before it, in order to facilitate its progreſs.

Alſo,

Alſo, if a number of ſmall and light conducting ſubſtances are laid between two metallic bodies, ſo as to form a circle, for example, a ſhock of electricity will deſtroy that circle, and place the ſmall conducting ſubſtances nearer to a ſtraight line between the two metals, as if the fluid knew there was a ſhorter paſſage, and reſolved to take that, if it ſhould have occaſion to return. Laſtly, it is univerſally allowed, that the brain is a ſecretory organ, made up of an infinite number of ſmall glands, which have no other excretories than the medullary fibres and nerves. As a conſiderable quantity of blood is carried to the brain, and the minute arteries end in theſe ſmall glands, it follows, that the nervous fluid *muſt come from the blood.* Now, there is no gland whatever, in the human or any other body, but will diſcharge the fluid it is appointed to ſecrete, in very conſiderable quantity, if its excretory is cut. Upon the cutting of a nerve, therefore, the fluid ſecreted by the brain ought to be diſcharged; but no ſuch diſcharge is viſible. A ſmall quantity of glairy matter is indeed diſcharged from the large nerves; but this can be no other than the nutritious juice neceſſary for their ſupport. This makes it plain, even to demonſtration, that the fluid ſecreted in the brain *is inviſible* in its nature; and, as we know the nervous fluid hath its reſidence in the brain, it is very probable, to uſe no ſtronger expreſſion, that it is the peculiar province of the brain to ſecrete this fluid from the blood, and conſequently that the blood originally contains the vital principle.

This fact being eſtabliſhed, I ſhall now endeavour to deſcribe the action of quickening, or mode by which life is communicated to the child in the womb, which uſually takes place in the fifth month of pregnancy. Opportunities, however, of diſſecting the human gravid uterus at or near this critical juncture occuring but ſeldom, it is with great difficulty that a ſubject of this delicate and abſtruſe nature can be treated with perſpicuity, and is the principal cauſe why it has not been attempted by former phyſiologiſts. I have already ſhewn that the rudiments of the embryo put forth four membranes, viz. the placenta, the navel-ſtring, the chorion, and amnios, which contain the fluid above mentioned, in which the fœtus floats. Until the period of quickening arrives, the embryo poſſeſſes only vegetative life, ſimilar to that of a common plant; and its growth is nouriſhed and preſerved by the fluid in which it ſwims, until the nerves, veins, arteries, and vital organs, are entirely formed, and the circulation of its mother's blood is completed through them, which is conducted in the following manner.

The placenta is the medium by which the blood from the heart of the mother is communicated to that of the child; but to check its rapid progreſs, which would overwhelm the tender veſſels of the infant frame, the texture of the placenta is formed ſimilar to that of a ſponge, round like a cake, of conſiderable dimenſions, and capable of great abſorption, being chiefly made up of the ramifications of the umbilical arteries and vein, and partly of the extremities of the uterine veſ-

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ſels. The arteries of the uterus diſcharge their contents into the ſubſtance of this cake; and the veins of the placenta, receiving the blood either by a direct communication of veſſels, or by abſorption, at length form the umbilical vein, which paſſes on to the ſinus of the vena porta, and from thence to the vena cava, and heart of the infant, by means of the canalis venoſus, a communication that is cloſed up in the adult. But the circulation of the blood through the heart is not conducted in the fœtus as in the adult; in the latter, the blood is carried from the right auricle of the heart through the pulmonary artery, and is returned to the left auricle by the pulmonary vein; but a dilatation of the lungs is eſſential to the paſſage of the blood through the pulmonary veſſels, and this dilatation cannot take place till after the child is born, and has reſpired. This deficiency is therefore ſupplied in the fœtus by an immediate communication between the right and left auricle, through an oval opening, in the ſeptum which divides the two auricles, called *foramen ovale*. The blood in the fœtus is likewiſe tranſmitted from the pulmonary artery to the aorta, by means of a duct called *canalis arterioſus*, which, like the canalis venoſus, and foramen ovale, gradually cloſes after birth. The blood is returned again from the fœtus to the mother through two veſſels called umbilical arteries, which ariſe from the iliacs. Theſe two veſſels, taking a winding courſe with the vein, form with that, and the membranes by which they are ſurrounded, what is called the umbilical chord. Theſe arteries, after ramifying

through the ſubſtance of the placenta, diſcharge their blood into the veins of the uterus, in the ſame manner as the uterine arteries diſcharge their blood into the branches of the umbilical vein. So that, after quickening, the blood of the mother is conſtantly paſſing in at one ſide of the placenta, and out again at the other, for ſuſtaining the life of the child.

Now what we call the *action of quickening*, is that inſtantaneous, yet undeſcribable, motion of the vital principle, which, the inſtant the fœtus has acquired a ſufficient degree of animal heat, and is completely formed in all its parts, ruſhes like an electric ſhock, or flaſh of lightening, conducted by the ſanguiferous and nervous fluid, from the heart and brain of the mother, to the heart and brain of the child. At this moment the entire circulation begins; the infant fabric is completely ſet in motion; and the child becomes a living *ſoul*. As ſoon, therefore, as the circulation commences, the child ſtarts into life; and the inſtant the circulation ceaſes, life ceaſes alſo. This *act of quickening* is therefore derived from the blood, and is ſo ſenſibly felt by the mother, that ſhe often faints, and feels an internal depreſſion of her animal and vital powers, which may be ſaid, in ſome meaſure, to have departed from her. But the act of quickening does not take place in all women at the ſame period, nor always in the ſame women at the ſame diſtance of time from her conception; nor is it governed by any given number of weeks or days after conception has taken place; but depends entirely on that inſtant of time, when the joint influ-

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The Action of Quickening.

Published as the Act directs June 10th 1794 by C. Taylor

ence of animal heat and an entire completion of the nerves, veins, arteries, and other parts and organs, of the fœtus, are fitted and ready to receive and ſupport a due circulation of the blood and juices; for this, and this alone, is the ſource of quickening, and the beginning of animal life. Strong and healthy women will therefore quicken ſooner than the weak and delicate, by reaſon that their procreative and ſtimulating powers are more robuſt, and can ſooner contribute that portion of animal heat, which is neceſſary to the entire completion of the fœtus in all its parts; and which will happen ſooner or later, according to the health and ſtrength of the pregnant woman, and her ſufficiency of menſtrual blood to ſupport the demand. For this flux will now be wholly taken up by the new ſubject, until the hour of birth; after which it either renews its monthly evacuation, as being redundant in the mother; or, if ſhe ſuckles the child, it is then determined to the mammæ, and is converted into milk.

Such is this curious and moſt admirable contrivance of nature, for the re-production and propagation of mankind; and ſuch the nature and event of that myſterious action of quickening, which has hitherto been involved in ſo much darkneſs and obſcurity, as to lead the unthinking multitude to ſuppoſe, that giving life to the fœtus was in every inſtance a new and diſtinct interpoſition of the Deity, inſtead of religiouſly imputing it to that primary exertion of his omnipotence, which, in the original formation of Adam, implanted in his nature the power of re-producing his like, and

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of imparting life and ſoul to his ſpecies, by a fixed and immutable decree, to be continued down from father to ſon, to the final end and conſummation of this ſublunary world. If the ſeed of Adam had not been originally endued with the gift of imparting life and ſpirit to his future generations, how could the ſouls of his deſcendants be ſubjected to original ſin? Were any one child deſcended from the race of Adam, to receive the gift of life and ſoul from a ſubſequent exertion of the power of God, it would become a new and diſtinct act of creation, and the offſpring could not poſſibly be contaminated by the fall, nor be ſubjected to the miſeries and misfortunes reſulting from it, as having received its being from an independent cauſe.

I have, to the beſt of my ability, endeavoured to illuſtrate this occult proceſs of nature, by means of the annexed copper-plate engraving, taken from a drawing of the viſcera and womb of an unfortunate female, who fainted and died at the time of quickening; the fœtus itſelf being now preſerved in ſpirits. The ſtructure of the gravid uterus is, however, extremely difficult to be ſhewn, and the more ſo under theſe peculiar circumſtances. In the wombs of women who die after this period, or at the time of labour, or ſoon after delivery, fibres running in various directions are obſervable, more or leſs circular, that ſeem to ariſe from three diſtinct organs, namely, from the place where the placenta adheres, and from the aperture and orifice of each of the tubes; with all the veins and veſſels communicating to and from the placenta

renta and the mother, ſurcharged with blood; but it is almoſt impoſſible to demonſtrate regular plans of veſſels and fibres, continued any length, without an interruption which involves us in doubt, and deſtroys that view of the admirable connexion which nature has formed between the vital organs of the mother and child in a ſtate of advanced pregnancy.

From the foregoing obſervations we may conclude, that the maſs of blood is the univerſal medium by which life is propagated, and health reſtored, to every claſs of beings; and that in its impure or infected ſtate, it is the ſource from whence the endleſs number of hereditary diſeaſes derive their origin. Whatever fault impairs the parent blood, fails not to taint the tender habit of its young; whence it has become an eſtabliſhed maxim, that, as healthy parents naturally produce healthy children, ſo diſeaſed parents as naturally produce a diſeaſed offspring. Some of theſe diſeaſes appear in the earlieſt infancy; others occur equally at all ages; whilſt others lurk unſuſpected in the habit to extreme old age, or even to a new generation, ſlowly impairing the vital organs, and gradually undermining the conſtitution, before their ſource, and fatal tendency, can poſſibly be diſcovered. There are ſome diſeaſes indeed, which, though born with us, cannot be ſaid to be derived from the parent, as when a fœtus receives ſome hurt by an injury done to the mother; while others, neither born with us, nor having any foundation in the conſtitution, are ſucked in with the nurſe's milk. Let it then be the care of every parent, who

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from ſome local misfortune is ſo far compelled to depart from the ties of nature as to abandon her tender offspring to the breaſt of another, to be ſatisfied, as far as human foreſight and medical penetration can reach, that the conſtitution and blood of the nurſe be free from ſcrophula, and every other hereditary impurity.

Accidental diſeaſes, though not derived from the parents, nevertheleſs in general ſpring from the blood; which, conſtituting or propagating animal life through every part of the body, is neceſſarily expoſed to every external offending cauſe, from which impreſſion particular or accidental diſeaſes enſue. The climate itſelf, under which people live, will often produce theſe affections in the blood; and every particular climate hath more or leſs a tendency to produce a particular diſeaſe, either from its exceſs of heat or cold, or from the mutability of the weather. An immenſe number of diſeaſes are alſo produced in the blood by impure air, or ſuch as is loaded with putrid, marſhy, and other noxious, vapours. The ſame thing likewiſe happens from high-ſeaſoned or corrupted aliment, whether meat or drink; though even the beſt and moſt nutritious aliment will hurt, if taken in too great a quantity; not to mention poiſons, which are endowed with ſuch pernicious qualities, that, even when taken in the ſmalleſt quantity, they produce the moſt grievous ferment in the blood, ending perhaps with death itſelf. There are likewiſe other accidents and dangers to which mankind are expoſed, that ingraft innumerable diſeaſes in the maſs of blood; ſuch as the bite of venomous

reptiles,

reptiles, or of a mad dog; an injudicious inoculation or mis-treatment of the ſmall-pox, or meaſles; the pſora, or itch; the venereal infection; alſo broken limbs, wounds, and contuſions; which, though proceeding from an external cauſe at firſt, fail not to impair the blood, and often terminate in internal diſeaſes and premature death.

Man, however, is not left without defence againſt ſo many and ſuch great dangers. The human body is poſſeſſed of a moſt wonderful power, by which it preſerves itſelf from diſeaſes, keeps off many, and in a very ſhort time cures ſome already begun, while others are by the ſame means more ſlowly brought to a happy concluſion. This power, called the *autocrateia*, or *vis medicatrix naturæ*, is well known both to phyſicians and philoſophers, by whom it is moſt juſtly celebrated; for this alone is ſufficient for curing many diſeaſes, and is of ſervice in all. Nay, even the beſt medicines operating only by exciting and properly directing this expulſive force, by which the excrementitious humours from the aliments and blood are expelled, through the proper channels of evacuation, through the excretory ducts, chiefly by means of the *inſenſible perſpiration*, by which power the offending humours from the blood and juices are perpetually flying off. But though phyſicians juſtly put confidence in this power, and though it generally cures diſeaſes of a ſlighter kind, yet it is not to be thought that thoſe of a more grievous tendency are to be left to the unaſſiſted efforts of nature. Phyſicians have

therefore a two-fold error to avoid, namely, either deſpiſing the powers of the *vis medicatrix* too much, which, if left alone, would work, a radical and perfect cure; or, putting too great a confidence in theſe exertions of nature, they are left unſeconded and alone, till the virulence of infection or diſeaſe undermines the conſtitution, and bears down all before it.

The grand and perpetual means by which the foul and offending humours in the blood and juices are continually carried off, is undoubtedly through the perſpirative pores and veſſels, which is highly compatible with ſound health to keep open, and for which purpoſe mendicaments are principally uſed. When this evacuation is copious and groſs enough to be diſcerned by the eye, as in ſweat, the perſpiration is ſaid to be ſenſible; but where it is ſo volatile as to eſcape the notice of the ſenſes, as is the caſe in the ordinary ſtate of the body, it is called *inſenſible perſpiration*.—The veſſels through which the perſpiration is performed lie obliquely open under the ſquamæ or ſcales of the cuticle or ſcarf-ſkin. They are inconceivably ſmall; from a calculation of Lewenhoek it appears, that the mouths of one hundred and twenty-five thouſand of them may be covered with a common grain of ſand. The moſt conſiderable of theſe pores are the orifices of the ducts ariſing from the miliary glands. Through theſe veſſels there is continually tranſuding a ſubtle humour, from every point of the body, and throughout the whole expanſe of the cuticle. The matter evacuated this way is found by certain experience

rience to be more than equal to that evacuated all the other ways, i. e. by ſtool, urine, &c. Sanctorius found in Italy, under the circumſtances of a moderate diet, middle age, and eaſy life, that the matter inſenſibly perſpired was five-eighths of that which was taken in for food: ſo that there only remained three-eighths for nutrition, and for the excrements of the inteſtines, bladder, noſe, ears, &c.

The ſame author ſhews, that as much is evacuated by inſenſible perſpiration in one day as by ſtool in fourteen days; particularly that, in the ſpace of a night's time, about ſixteen ounces are ordinarily diſcharged by urine, four ounces by ſtool, and above forty ounces by inſenſible perſpiration. He alſo obſerves, that, if a man eat and drink eight pounds in a day, five pounds of it are ſpent in inſenſible perſpiration; and adds, as to the times, within five hours after eating there is perſpired about one pound; from the fifth to the twelfth hour about three pounds; and from the twelfth to the ſixteenth ſcarcely half a pound. M. Dodart, from a number of experiments made thirty-three years ſucceſſively, proves that we perſpire much more in youth than in age. In ſome perſons the perſpiration is ſo copious, that they void very little of the coarſer excrement, though they eat heartily. The benefits of inſenſible perſpiration are ſo great, that without it animal life could not be preſerved. The general cauſe of perſpiration is the circulation and heat of the blood, which enables it to throw off the offending matter. The great ſubtilty, equability, and

plenty, of the matter thus perſpired, its increaſe after ſleep, &c. conſtitute the grand ſymptoms of a perfect ſtate of health; and the chief means of preſerving the ſame. On the contrary, the departing from theſe is the firſt ſure ſign of approaching diſeaſe.

Perſpiration is performed, preſerved, and increaſed, by the viſcera, veſſels, and fibres; by motion or exerciſe as far as the firſt appearance of ſweat; by a moderate uſe of venery; by ſleep of ſeven or eight hours, the body well covered, yet not loaded with bed-clothes; cheerfulneſs; light, fermented, yet ſolid food, not fat; pure, not heavy air, &c. The contraries of all theſe, as alſo the increaſe of the other excretions, diminiſh, prevent, and deprave, it. Hence we ſee the cauſe and effect of this perſpirable matter, its uſe in preſerving the parts ſoft and flexible, and in ſupplying what is loſt, but chiefly in preſerving the nervous papillæ moiſt, freſh, lively, and fit to be affected by objects, and to tranſmit their impreſſions. Hence it is, that upon a ſtoppage of the uſual perſpiration there ariſe ſo many indiſpoſitions, particularly fevers, agues, rheums, &c. Too much perſpiration occaſions weakneſs, and ſwoonings; whilſt too little or none at all, occaſions the capillary veſſels to dry, wither, and periſh. Hence alſo the larger emunctories come to be obſtructed; hence the circulation is diſturbed, ſharp humours retained; and hence putridity, crudity, fevers, inflammations, and impoſthumes. Cold prevents perſpiration, by conſtringing the pores of the ſkin and thickening the liquors circulating in the cutaneous glands;

glands; heat, on the contrary, augments it, both by opening the excretory ducts of the glands, and by increasing the fluidity and velocity of the humours. To determine the state and conditions of the perspiration, so necessary for judging of those of the body, Sanctorius invented a weighing chair, whereby he examined the quantity, degree, &c. of perspiration in several circumstances of the body, under several temperatures of the air, and in the several intervals of eating, drinking, sleeping, &c.

Some of the more extraordinary phenomena observed in this speculation, are, that for some time after eating the perspiration is least of all; that from the fifth hour after meals perspiration is greatest; that riding either on horseback, in a coach or ship, &c. brisk motion on the ice, &c. but above all, a brisk friction of the skin, promote perspiration surprisingly; and that perspiration is naturally always much less in women than in men. Perspiration is influenced by the passions of the mind. Thus anger and joy increase, and fear and sadness lessen, both perspiration and urine. Anger causes a strong motion in the membranes of the heart, and quickens its contraction and dilatation, and thereby quickens the contraction and dilatation of the blood-vessels and secerning ducts, and of consequence increases the discharges of perspiration and urine; and that more or less, in proportion to the strength and continuance of the passion. Joy affects these discharges in like manner as anger. In the passions of fear and sorrow, perspiration and urine are lessened, by the depression

of the activity of the ſoul under thoſe paſſions. The proportion of perſpiration to urine is increaſed by all thoſe exerciſes which increaſe the motion of the blood and warm the ſkin. We have an account of a perſon who, by paſſing many nights in aſtronomical ſpeculations, had his perſpiration ſo obſtructed by the cold and damp of the air in Holland, that a ſhirt he had worn for five or ſix weeks was as clean as if it had been worn but one day. The conſequence of this was, that he gathered ſubcutaneous waters; but was cured in time. The garments beſt calculated to encourage and promote inſenſible perſpiration, to keep the mouths of the minuter veſſels open, and to guard the body from the too ſudden and violent effects of cold, are thoſe made of flannel. Whence flannel ſhirts and waiſtcoats, or a ſquare piece of flannel worn over the breaſt or pit of the ſtomach, particularly in the winter months, are productive of ſuch beneficial effects to weakly and debilitated conſtitutions, and act as a valuable preſervative to the hale and robuſt. In the annexed copper-plate engraving, I have endeavoured to ſhew the manner in which the inſenſible perſpiration iſſues from the pores of the body, which can only be diſcerned by means of a lens; being of ſo volatile and ſubtle a quality, that it paſſes through our garments with the utmoſt eaſe, particularly if woollen; and it even aſcends through the bed-clothes like a miſt, in the greateſt abundance when we are aſleep, and the animal functions at reſt.

In this manner nature from all caſual obſtructions endeavours to relieve herſelf; and ſo long as diſeaſes

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The Insensible Perspiration

Published as the Act directs June 20 1794. by T. Sibly.

Pap's sculp

are recent, and of a mild tendency, they are uſually carried off by this means, without requiring any aid from medicine. When, however, diſeaſes are of long ſtanding, and the humours in the blood become too foul and viſcous to be thrown off by the *vis medicatrix naturæ*, the whole habit is quickly vitiated, and the circulating maſs becomes morbid; yet even in this infected ſtate, the vital heat and activity of the blood ſtrives to purify itſelf, by determining theſe morbid particles to the ſkin, where they form ſcabs, ulcers, pimples, and other ſpots, as in the ſcrophula, leproſy, ſmall-pox, meaſles, ſyphilis, &c. or elſe the virulent matter is directed inwards, where, falling upon the lungs and other viſcera, death quickly enſues. Here then we may view the ſhocking conſequences which reſult from thoſe who enter into matrimony under a tainted or infected ſtate of the blood. Perſons who are afflicted with the leproſy, ſcrophula, or king's evil, ſhould never marry until a perfect cure has been effected, and a pure and healthful ſtate of the blood induced. To enter into marriage under a venereal taint, is a moſt unwiſe, a moſt cruel, and an ungenerous, act. A man, with only a ſlight infection, by contact with the woman, will himſelf, perhaps, experience a perfect cure, in conſequence of the foul and infectious matter being drawn from the parts by the female organs, ſeconded by the action of the rugæ and abſorbent veſſels on the ſurface of the vagina. But the unhappy female is ſure to take the diſorder, and, ſhould ſhe prove with child, ſhe not only carries the poiſonous infection into the marrow of her own bones, but brings

brings an infant offspring into the world, devoted to miſery and diſeaſe; for whatever foul and infectious humour is implanted in the parent blood, it is immediately carried by the circulation to the vital organs of the child, juſt as the flame of one candle is by contact communicated to another. Nor can we be ſurpriſed at theſe things, if we only reflect on what has already been adduced, and contemplate the ſyſtem and œconomy of the human frame. Conſider only the powerful effects of a few grains of cantharides, which, if externally applied, act as a burning cauſtic; but, if taken into the ſtomach, inſtantly overturn the natural courſe of the circulation, by forcing the whole maſs of blood into the extremities, but more particularly, and with great vehemence and turgidity, into the private parts; for which reaſon cantharides are taken with intent to cure the weakneſs and debility of the penis; but the truth is, that greater debility, and an emaciated conſtitution, is ſure to follow, and not unfrequently inſtant death.

If, then, ſo powerful an effect can be wrought on the blood by ſwallowing a few irritating particles of a ſmall inſect, may we not juſtly infer, that by infuſing into the circulating maſs, particles congenial to itſelf, the utmoſt relief may be afforded to it, even in its moſt depraved and inactive ſtate? From this conſideration alone, we may venture to pronounce, that all diſorders originating in the blood, might either be prevented or repelled, were ſuch a medium diſcovered, by which we might infuſe immediately into the maſs a combination

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of ſuch elemental principles as the blood and juices themſelves conſiſt, in their pureſt and moſt elaſtic ſtate; for this, in fact, is the aim of all medicines; but which they miſs by being adminiſtered in their groſs form, and being obliged to paſs the ſeveral digeſtive operations of the ſtomach, before they can reach the blood, whereby the principal part of their occult virtue is loſt among the food, or ſecreted in ſuch ſmall quantities as to produce very little effect. But a medium, poſſeſſing theſe congenial principles, ready digeſted, and ſo combined as to be taken inſtantly, and without diminution, into the habit, would not only keep the cruor and the ſerum in due proportion, which is ſo eſſential to health, but would ſtimulate, correct, purify, and augment, the blood, as its reduced or diſordered ſtate might from time to time require. Such a medium, after infinite labour, and unlimited experience, I pronounce the Solar Tincture to be; and ſuch will be found its operative effects, under whatever circumſtances it may be adminiſtered, in any climate or ſeaſon; the innocent and balſamic qualities of which are as grateful to the internal organs of the human frame, as the ſolar rays are cheering to the external; and it affords me no ſmall gratification to avow, that, in offering it to the public, I invade no man's property, nor imitate any medicine at preſent known in public or private practice.—The experiments I have made with it upon a variety of diſeaſed wretched objects, are innumerable; and I ſhall ſtill continue to adminiſter it *gratis*

to the poor, who are given over by others, or who have not the means of applying for medical aſſiſtance.

The infinite variety of complaints an impure or infected ſtate of the blood induces, almoſt exceeds belief; and hence the new and deceptive forms a ſcrophulous or ſcorbutic taint puts on, which often deceive the moſt eminent of the faculty, and baffle the beſt intention towards a cure. An impure or ſcrophulous taint will invade the nobleſt organs of the human frame, before the patient can be aware of his danger. In the firſt ſtage of its viſible effects, a weary pain ſeizes the joints and muſcles, attended with a waſting of the legs and loins. In the ſecond ſtage the gums ſwell, grow painful, hot, and irritable, and bleed upon the ſlighteſt preſſure; the roots of the teeth become bare and looſe, and the breath nauſeous. In the third ſtage, the gums grow putrid, the teeth black and rotten, the ſublingular veins become varicoſe, and the breath cadaverous; fœtid blood diſtils from the lips, gums, mouth, noſe, lungs, ſtomach, liver, ſpleen, pancreas, inteſtines, womb, kidneys, &c. ſcabs and ulcers break out in all parts of the body, and the joints, bones, and viſcera, become morbid. In the fourth ſtage, putrid, eruptive, and ſpotted, fevers enſue, which end in an atrophy, or elſe follow diarrhœas, dyſentery, dropſy, conſumption, palſy, contractions, melancholy, and all the long and direful train of nervous diſorders, which to deſcribe would fill a volume.

To counteract this moſt virulent of all chronic complaints, the utmoſt exertions of human ſkill have been

been employed. The remedies preſcribed in its different ſtages are almoſt innumerable. The object is to reduce the virulence of the infection, and to eradicate its ſeeds from the blood and lymph; to which end the mildeſt and moſt ſimple medicines are recommended. Mineral and tar waters, for their warm and ſtimulating quality; milk or whey, from their ſimilitude to the chyle; the cold bath, for bracing the ſolids and quickening the circulation; antiſcorbutic vegetables, &c. for purging and ſweetening the blood, ſuch as ſcurvy-graſs, water-creſſes, wormwood, hemlock, centaury, vervain, water-trefoil, juniper-berries, the Peruvian bark, ſaſſafras, guaiacum, aloes, aſſa-fœtida, camomile, diaſcordium, ſaffron, ſenna, rhubarb, manna, Æthiop's mineral, hartſhorn, native cinnabar, antimony, &c. When theſe fail, mercury, or a mercurial ſalivation, is looked upon as the only cure; which, in fact, is but to give the human frame its laſt vehement ſhock, and to ſend the wretched patient in agonies to the grave!

The intention of all theſe remedies is to impregnate the blood with qualities oppoſite to thoſe with which it is infected; and this muſt be done in a ſuperior degree of force and power, before a cure can be completed. But theſe medicaments are often adminiſtered under ſuch nauſeous forms, and in ſo crude and unqualified a ſtate, that they not only torture the patient, but miſs entirely their intended aim. The nauſeous taſte of medicine is nothing but its groſſer particles; which, inſtead of entering the ſtomach, to irritate and oppreſs its organs, ought to

be drawn off by chemical proceſs; for it is the occult virtue of every drug, not its groſſer part, that performs the cure. Now the peculiar excellence of the Solar Tincture is, that it combines the eſſential and occult virtues of all ſcorbutic vegetables, ready digeſted, concocted, purified, and reſolved into an elegant balſamic eſſence, pleaſing to the taſte, and grateful to the ſtomach. It flies immediately to the heart, whether internally or externally applied, blends and aſſimilates with the venal and arterial blood, which it generates, corrects, warms, purifies, animates, and impels through the whole ſyſtem. It cleanſes all the viſcera, and glandular parts, particularly the lungs and kidneys; ſtimulates the fibres, whereby the gaſtric juice and digeſtion are promoted; diſſolves viſcid humours, and expels infection. It exerts very conſiderable effects on the whole nervous ſyſtem, ſenſibly raiſes the pulſe, ſtrengthens the ſolids, and invigorates the animal ſpirits. It penetrates into the moſt intimate parts, opens the mouths of the minuter veſſel, reſtores the natural perſpiration, and promotes all the fluid ſecretions. In every ſtage of infectious diſeaſes, and in all ſudden epidemical diſorders, which uſually follow from a wet, putrid, and unwholeſome, ſtate of the atmoſphere, it is an abſolute ſpecific; and, as a preventive, an alterative, and purifier of the blood, it has not its equal in the world. It quickly relieves every common malady originating in the blood, ſuch as relaxations, debility, laſſitude, tremors, ſinking of the ſpirits, and all thoſe nervous affections which harraſs

and

and oppreſs the weak, ſedentary, and delicate; and are often the conſequences of high living and luxuriant indulgences, without bodily exerciſe and freſh air. In all theſe caſes, the Solar Tincture is calculated to warm and ſteady the cold tremulous nerves; to ſheathe and invigorate the muſcular ſyſtem; to animate the ſpirits; and renovate the whole man, whereby the chill watery fluids become rich and balſamic, and the circulating maſs reſumes its healthful ſtate. It is an infallible cure for joint-achs, cramps, ſpaſms, rheumatic-gout, nervous head-ach, agues, and all diſorders ariſing from obſtructed perſpiration. In complaints of the breaſt, ſtomach, and bowels, it gives immediate relief; and, in aſthmatic and conſumptive caſes, it is an elegant and expeditious cure. It will ſtop mortification in very advanced ſtages, by expelling the poiſonous matter, and correcting the juices of the whole body. It requires no argument to convince, more than a ſingle trial; after which, I think, no family who value their health or life will chuſe to be without it; particularly under any of the following afflictions:

SCROPHULA, SCURVY, or KING'S EVIL.

In the firſt and ſecond ſtages of this diſorder, a ſmall table-ſpoonful of the Tincture, taken in a wine glaſs of cold ſpring-water night and morning, will prevent the further progreſs of the diſeaſe, and in a very ſhort time reſtore the blood to its healthful ſtate, the effects of which will be ſo obvious to the patient, that he will be at no difficulty when to diſcontinue the medicine. In the third ſtage, it is often

ten requiſite that the medicine be internally and externally applied. The mouth ſhould be frequently waſhed with the Tincture diluted in warm water, and it will very ſoon expel the poiſon from the gums. If the viſcera be in a morbid ſtate, which may be known by the excrements, or foulneſs of expectoration, it will be neceſſary to take the medicine, night and morning, for ſeveral days, in the quantity of a table-ſpoonful *undiluted*; and, at noon, a table-ſpoonful in the ſame quantity of warm water. The ſcabs, whether dry or moiſt, ſhould be frequently waſhed with the Tincture, *undiluted*, which, being abſorbed by the minuter veſſels, and taken into the habit, will expel the humour, and clear away the ſcurf. If tumours or foul ulcers occur, waſh them frequently with a dilution of the medicine in the ſame quantity of warm water, until the heat and virulence be abated; then apply the Tincture *undiluted*, with lint or fine rags, by which means the infectious matter will be totally eradicated, the blood and juices purified, and the ulcers healed.

In the fourth ſtage, whatever may chance to be the ſad malady to which the diſorder ultimately turns, a ſtrict attention to regimen, exerciſe, and freſh air, as far as the ſtrength and condition of the patient will admit muſt be particularly attended to. And, in all theſe caſes, the beſt and moſt ſimple methods of treatment are laid down in the Medical Part of my Engliſh Phyſician, page 168, &c. to which I beg leave to refer every patient in this dreadful ſtage of the diſeaſe; and, in aid of the advice there given,

given, let the Solar Tincture be regularly perſiſted in every night and morning, in the quantity of one table-ſpoonful in as much warm water; and, at twelve o'clock at noon, take a table-ſpoonful *undiluted*.—Let this be continued eight or ten days; then take a table-ſpoonful diluted in warm water three times a-day, morning, noon, and night, till the nerves and organs begin to reſume their healthful tone; then let the doſes be gradually abated to a ſpoonful in water every other morning, which ſhould be continued till health is perfectly re-eſtabliſhed; and which, by God's bleſſing, will generally happen, even in theſe deſperate caſes, in the courſe of a month or ſix weeks.—As a preventive of all foul or ſcrophulous taints in the habit, and as an alterative, and purifier of the blood, it may be occaſionally taken every morning, for a week together, particularly in the ſpring and fall, in the quantity of a table-ſpoonful in a wine-glaſs of cold ſpring-water; or it may be occaſionally taken as a beverage after dinner or ſupper, mixed in a tumbler with warm water, and made palatable with ſugar. It will be found pleaſant to the taſte, and grateful to the ſtomach, ſuperior to any ſpirits, or punch. The many inſtances of elegant and uncommon cures effected by the Solar Tincture, on perſons of the firſt eminence, may be inſpected at any time, on application at my houſe. But, at the particular requeſt of the parties, I have here added the following remarkable

CASE.

Mr. R. Pinder, of Bramſtone, near Bridlington, in Yorkſhire,

Yorkſhire, had been long afflicted with a violent ſcorbutic humour in his blood, which threw out ſometimes dry and ſometimes moiſt, ſcabs and tumours on the ſkin. Being neglected, it at length pervaded the whole ſyſtem, till, turning inwardly, it fell upon his lungs, and reduced him to the laſt ſtage of a conſumption. In this deplorable ſtate, given over by the faculty, left totally emaciated, and incapable of turning in his bed, he fortunately had recourſe to the Solar Tincture. The firſt doſe was given *undiluted*, which threw him into a fine perſpiration, and compoſed him to ſleep, which had long been a ſtranger to his eyes. After one large bottle had been adminiſtered agreeable to the bill of directions, at the end of a week he was ſo much reſtored, that with very little aſſiſtance he was enabled to put on his own clothes; and, after continuing the medicine for little more than a month, he was able to walk abroad. And now, after having continued Tincture night and morning, and occaſionally uſing it as a beverage made ſimilar to warm brandy and water, he has quite recovered his former health and ſtrength; being, to the ſurpriſe of every body who beheld him in his late emaciated condition, as robuſt and hearty as it is well poſſible for a man to be.

Debilitated, Tainted, and Enfeebled, Constitutions.

Muſcular debility was a misfortune but little known to our forefathers. Whether immured in venereal embraces, or ſacrificing at the ſhrine of Bacchus, moderation and ſeaſonable hours directed the meaſure of their

their enjoyment. If revelry or voluptuouſneſs by chance unſtrung their nerves, gymnaſtic exerciſes and field ſports, or the more pleaſurable delights of the chace, quickly reſtored them to their proper tone, gave new vigour to the blood, health to the cheek, and lighted up afreſh the flame of love. But now, how ſtrange is the reverſe! Habituated to effeminacy, and fed with dainties; revelling all night with wine, and ſtretched on beds of down all day; ſhut up in ſtews and brothels, ſcarcely breathing wholeſome air; claſped in the arms of tainted or diſeaſed females, until enjoyment palls upon the ſenſes, and the muſcular powers abſolutely refuſe their office, no wonder ſo many men are found old in every thing but years; whoſe conſtitutions are fairly worn down, blood ſtagnant, ſolids relaxed, ſecretions diverted from their proper courſe, muſcles debilitated, eyes ſunk, cheek palid, and ſpirits gone. Theſe are not half the evils reſulting from this faſhionable ſource of deſtructive folly. It may not be amiſs, however, to deſcribe the remarkable caſes of a few, of whom the Solar Tincture has made perfect cures, by infuſing a new portion of health into the maſs of blood; ſincerely hoping, that a more wiſe and manly courſe of life will ſhortly eradicate theſe diſgraceful complaints, and reſtore to the ladies a genuine race of Engliſhmen and Britons.

CASES.

Premature Debility. A gentleman in the army, under thirty years of age, complained to me that he had all at once *become incapable of enjoying his*

wife. Suſpecting he was not married, I deſired him to be open and candid, to relate to me his *real* ſituation, and not a *pretended* one, which was only to impoſe on his own underſtanding. He thanked me for the rebuke, ſaid he would be frank, and in a few words declared, That from exceſſive luſt, and continual debauch, he had loſt his virility; and, to add to the misfortune, he was really on the eve of entering into the marriage ſtate. In other reſpects he felt no diminution in his health or conſtitution; and, from external appearance, this was ſurely the laſt imperfection that could have been ſuſpected. His complexion was vigorous and lively, his fleſh firm, and conformation excellent; yet, notwithſtanding this, he was impotent to ſuch a degree, that neither the ſtrength of his own deſires, nor the excitations of the female, could affect the part. It often happens, that, though the organs remain ſound, yet, if the nervous and ſeminal fluids have degenerated from a healthful ſtate, if they are impoveriſhed by being too much drained, or turned into an unnatural courſe, they cannot then perform their office, by reaſon that their moving powers, and ſtimulus on the blood, are become too weak to direct their force and action in the manner nature requires in the act of copulation. I therefore enjoined him to abſtain entirely from all attempts of the kind, for three months at leaſt; directed the ointment as in page 240 of the Medical Part of my Engliſh Phyſician, with the Solar Tincture three times a-day for two months; then twice a-day, until he found it no

longer

longer neceſſary. After taking ſix large bottles, he generouſly thanked me for a more hale and robuſt ſtate of body than he ever remembered to have enjoyed before. He has ſince ſent me ſeveral patients, in almoſt as debilitated a ſtate as he was himſelf, who are now ready to unite with him in giving full teſtimony to the renovating powers and peculiar efficacy of the Solar Tincture.

Relaxed Habit.

Little more than three months ago, a gentleman, about fifty years of age, lately returned from the Eaſt Indies, applied to me for the cure of what he termed a *broken conſtitution*. He had made very free with the ſable beauties of Bengal; had undergone a mercurial ſalivation, and appeared to be ſinking under an univerſal languor and debility of the whole muſcular ſyſtem. The ſphincter of the bladder was ſo weakened, that the urinary ſecretion came from him by drops, in ſo perpetual and involuntary a manner, as not to be perceived until the moiſture of one ſet of cloths became ſo ſenſibly afflicting, as made it neceſſary to ſupply freſh ones, which uſually happened every hour. The corporeal functions were diſſipated and relaxed, the tone of the ſtomach and viſcera was nearly gone, the tremulous nerves reluctantly performed their office, and the circulation was become ſtagnant and morbid. I adviſed an immediate recourſe to the moſt nouriſhing food, with ſtrong port-wine negus for his drink; and the Solar Tincture to be taken four times a-day for the

firſt month; three time a-day for the ſecond month; and once or twice a-day afterwards, as occaſion might ſeem to render neceſſary. Before the expiration of twenty days, the ſphincter muſcle acquired its proper tone, the pulſe became ſtrong and regular, and the nervous tremors were conſiderably abated. By the end of the ſecond month, a renovation of the whole animal œconomy ſeemed to have taken place, and a viſible accumulation of blood and juices had retrieved the circulation. Before the expiration of three months, I had the gratification to ſee this patient completely reſtored to ſuch a ſtate of bodily health and ſtrength, as utterly aſtoniſhed himſelf, after taking only eight large bottles of the Solar Tincture.

Hypochondriacal Debility, or Weak Nerves.

A gentleman in Oxfordſhire lately came to town on purpoſe to conſult me in this complaint. He appeared to be near thirty years of age, of middling ſtature, but of a weakly conſtitution. He had for upwards of ſeven years paſt paid his addreſſes to a lady, whom he had long promiſed, and very much deſired, to marry; but whenever he propoſed in his mind to fix the day, or whenever it happened that he attempted to ſalute or embrace her, he was ſeized with an unaccountable tremor of the whole body, his ſpirits ſunk, his virility left him, and a violent palpitation of the heart enſued. In ſhort, he was ſo diſtruſtful of his own powers, that he confeſſed it was the fear of not being able to perform the rites of the marriage-

marriage-bed that had been the only and the ſole cauſe of thus protracting his wedding day. This is certainly a moſt ſingular inſtance of the hypochondriacal affection, and of its derangement of the nervous ſyſtem. The debility induced by it ſeems to ariſe from the weaker energy of the brain, the fault of which, however, cannot be detected by the niceſt anatomiſt. For this reaſon we do not well know how ſuch defects ſhould be reſtored; but as nature, ſeemingly for this purpoſe, excites the motion of the heart and arteries, we muſt aſcribe the continuance of ſuch debility to the too-weak action of the ſanguiferous ſyſtem. The heart will generally palpitate from a violent excitement of the nerves, eſpecially when the blood is endowed with too ſmall a ſhare of ſtimulus. Hence palpitation from any affection of the mind, and from hyſterics in women. Under whatever circumſtances this hypochondriacal affection happens, it debilitates the whole animal machine, and renders the perſon unable to perform the proper offices of life. The proſtration of ſpirits, weakneſs, and languor, are often ſurpriſingly great, though the pulſe ſeems tolerably ſtrong, as being heightened by animal deſire. The effect, however, is ſure to produce a languid circulation, the blood ſeeming to adhere, with uncommon energy, about the region of the heart. I ſuſpect it is in theſe caſes that cantharides are moſt frequently uſed. The patient acknowledged, after ſome heſitation, that he had tried them; but they only produced an involuntary though violent erection, by no means adapted

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to the cure, nor to the purpoſe he intended. Hence this remedy is not only inadequate, but extremely dangerous; for it too much exhauſts the vital powers, and is followed by a vaſt dejection of ſpirits, tremors, ſtartings of the tendons, &c. which bring on rigours, cold clammy ſweats, ſyncope, and premature death.

The means, therefore, which nature points out for the cure of this ſpecies of debility, are directed to ſupport and increaſe the action of the blood through the heart and arteries; and the remedies to be employed are tonics and ſtimulants. Of all the ſtimulants, which in this conſtitutional defect may be advantageouſly employed, port-wine ſeems to be the moſt eligible. It has the advantage of being grateful to the palate and ſtomach, and of having its ſtimulant parts ſo much diluted, that it can be conveniently given at all times and ſeaſons, and may be employed with ſufficient caution; but it is of little ſervice unleſs taken pretty largely. It may be ſuſpected that wine has an operation analogous to that of opium; and on good grounds. But we can diſtinctly mark its ſtimulant power only; which renders its effects in the phrenitic delirium manifeſtly hurtful; but it caſes of debility as remarkably uſeful. Hence I directed the Solar Tincture to be taken morning, noon, and night, in ſtrong doſes, for the firſt month; once a-day, or oftener, at the diſcretion of the patient, until the end of the third month; but to drink every day, after dinner, a pint of generous port; and to inform me at intervals the change he might find in his conſtitution. He took with him a dozen

large

large bottles of the Solar Tincture; and, before a month elapſed, I had the pleaſure of receiving an epiſtle of unfeigned thanks. He found himſelf ſo much reſtored by the courſe I laid him under, that, before the expiration of the three months, he married the lady; and I have no doubt will very ſhortly have iſſue. I have been ſomewhat more elaborate in deſcribing the particulars of this caſe, having reaſon to believe it is not an uncommon malady, and would therefore wiſh to enable every patient to become as much as poſſible a judge of his own infirmity.

Nocturnal Emissions, or Incontinence of the Semen.

A young man of robuſt make, and in the prime of life, being under twenty ſix years of age, applied to me for relief in the above unfortunate complaint. It appeared, that, from the time of puberty, he had found a weakneſs in the part, and an occaſional diſcharge of the ſeed, upon the ſlighteſt irritation. As he grew up to greater maturity, the malady increaſed upon him. Upon every attempt to have contact with a female, the ſemen paſſed involuntarily from him, before even a complete erection could take place, whereby his purpoſe was continually defeated. This defect grew upon him, until the bare ſight or thought of any thing which tended to excite venereal deſires brought away the ſeed; yet it had no affinity whatever to a gleet, becauſe the emiſſion never occurred but either in the attempt, or in the deſire, of copulation; or under the influence of laſcivious

dreams. In proportion as this weakneſs grew upon him, his deſire of familiarity with the ſex became ſtronger; and, I am inclined to think, was the principal reaſon of the increaſe of the malady, and of the nocturnal emiſſions, which happened more or leſs every time he went to ſleep. This inceſſant diſcharge had reduced him to a meagre viſage, ſallow complexion, hollow eyes, depreſſion of ſpirits, and ſlow-fever; and a galloping conſumption would ſoon have followed. I directed the Solar Tincture every morning at ſun-riſing, at mid-day, and at ſix o'clock in the afternoon, in the quantity of a wine-glaſs full, with one third warm water; and every night at going to bed, twenty drops of liquid laudanum, for the purpoſe of making his ſleep too ſtrong to be affected by the influence of dreams. This courſe, aſſiſted by a ſtrengthening regimen of calf's-foot jelly, veal-broth, and ſtrong port-wine negus, had very quickly the deſired effect. His ſleep was perfectly ſound and calm, and, after the third night, he could not recollect the return of any nocturnal emiſſion. The ſtrengthening ointment, directed in page 240 of my Engliſh Phyſician, was uſed every other morning; and, within the ſpace of only two months, the ſeminal veſſels were completely braced up, and the diſorder ſo totally removed as not to leave a ſingle ſymptom of his former weakneſs.

ONANISM.

A youth, apparently under age, applied to me for the cure of a diſorder, which, he ſaid, had deprived him of the power of erection, and of all ſenſation in the privities.

privities. In ſo young a ſubject, I could not ſuppoſe this want of tone to ariſe from a general debility of the nervous ſyſtem, particularly, as no other ſymptoms warranted the concluſion. I had a ſtrong ſuſpicion it was the effect of Onaniſm, or ſecret venery, which uſually ends in this ſpecies of abſolute impotency; but this he denied. He told me he had ſome time ago contracted the foul diſtemper, and through ſhame, and the dread of its coming to the knowledge of his parents, he had neglected to diſcloſe his misfortune to any perſon, until the preſent malady was brought on. Of the foul diſtemper, however, I could find no other ſymptom than a ſimple gleet; and, upon putting the neceſſary queſtions, not a ſingle reply correſponded with the uſual effects of that diſorder. After half an hour's cloſe examination, I brought him to confeſs what I above ſuſpected, that he had ſo much addicted himſelf to this ſhameful and deſtructive vice, that the ſeminal veſſels were completely relaxed; the erectories, the nerves, and glans, of the penis, had entirely loſt their tone; an involuntary diſcharge of the ſemen, without irritation, or turgidity of the parts, had long taken place, and brought on a want of appetite, an impoveriſhed ſtate of the blood, and an univerſal laſſitude of the body. The lecture I gave him upon this occaſion, will never, I truſt, be effaced from his memory; and he has ſince faithfully promiſed that it ſhall not. I directed the ſtrengthening electuary and ointment, in page 239 and 240 of my new edition of Culpeper's Engliſh Phyſician, to be uſed as therein preſcribed; then to take four times a-day,

a table-ſpoonful of the Solar Tincture in an equal quantity of warm water, for a month at leaſt; then three times a-day for the ſecond month, and twice a-day, in cold ſpring-water, for the two months following; which gradually coiled up the debilitated parts, gave elaſticity to the blood, retrieved the ſenſation of the glans, and the ſympathetic office of the erectories, braced the nerves, ligaments, and tendons, and gave that due tone and energy to the muſcular ſyſtem, which in leſs than four months reſtored the patient to perfect health and vigour.

To cure a weak and debilitated ſtate of the penis, the late John Hunter ſucceeded, by recommending a frequent immerſion of that organ in a ſtrong decoction of muſtard-ſeed; and Motherby, in his new and valuable Medical Dictionary, has availed himſelf of this diſcovery, as a ſpecific againſt this impoveriſhed ſtate of nature. By analogy, I conceived the Solar Tincture, from its genial invigorating powers, to be far ſuperior to the decoction. But fairly to aſcertain the fact, I was induced to examine them both by the ſame chemical analyſis; the event of which quickly convinced me of the ſuperior ſtimulus of the Tincture. This emboldened me to recommend it to ſeveral patients, who, either from youthful inadvertency or exceſs—from advanced age—ſecret and ſlow diſeaſe—or the baneful relaxation of hot climates—had induced a perpetual flaccidity of the part. I admoniſhed them to immerſe and to ſoak the penis ſeveral times a day in the Solar Tincture, exactly in the mode Mr. J. Hunter had recommended the decoction of muſ-

tard-

tard-ſeed; and to my extreme ſatisfaction, I have not known one inſtance wherein it has failed of reſtoring the due tone and vigour of the part. Any perſon labouring under ſuch an unfortunate ſpecies of diſeaſe, may convince himſelf of this immediate and wonderful ſtimulus, by only one immerſion; and he will find a frequent repetition thereof will completely animate the muſcular fibre, and eventually reſtore that impeded circulation through the arteries and nerves, the want of which is the ſole and only cauſe of this unnatural imbecility.

Impure or Tainted Habit.

This malady, ſo common among our diſſipated youth, generally ariſes from a venereal complaint badly cured. Indeed the ſcrophula, the king's evil, the leproſy, and other foul humours, when too long ſuffered to prey upon the blood, will naturally induce this conſequence; yet ninety-nine caſes out of every hundred are found to reſult from the improper uſe of mercury, either taken too abundantly into the ſtomach, or too often applied externally, in the venereal diſeaſe. A gentleman in the army very lately came to me under this misfortune, who had abſolutely worn down the organs of his ſtomach by taking medicines for its cure without obtaining the ſmalleſt relief. He was no ſooner warm in bed, than deep-ſeated nocturnal pains attacked his arms, ſhins, and head, which many of the faculty miſtook for rheumatiſm. The membranes, muſcles, and ligaments of the joints, were ſcarcely ever free from pain; whilſt carious ulcers occaſionally broke out upon the ulna,

tibia, and bones of the cranium. Theſe ſymptoms had alſo deceived ſeveral of the faculty, who, taking his complaint to be a confirmed lues, ſtill added to the malady, by loading him with freſh doſes of mercury. The truth is, that this diſorder was by no means of a venereal nature, but was rather the conſequence of the remedy than of the diſeaſe, ſince it aroſe entirely from the long and repeated doſes of mercury his body had ſuſtained, and which was grounded in his habit by ſalivation. The mercury had inſinuated itſelf into the marrow of his bones, had vitiated every fluid ſecretion, and tainted the very air he breathed. Under ſuch circumſtances, I will allow, it is very difficult, if not almoſt impoſſible, for a phyſician, upon a ſuperficial inſpection, abſolutely to decide, whether the original diſeaſe hath been altogether overcome; yet ſurely he ought attentively to diſtinguiſh and conſider the ſeveral ſymptoms apart; and then by comparing them with each other, a clear judgment may be formed upon the general review. Finding, by this method, the real ſtate of the patient's caſe, I ordered him a nouriſhing diet, gentle exerciſe, and an abſolute denial of the ſmalleſt intercourſe with woman. To this he readily ſubmitted, putting himſelf under a regular courſe of the Solar Tincture, which he took three times a-day, in the quantity of a wine glaſs three parts full, filled up with water, for the firſt month. At the expiration of this time he paid me a viſit, when his company was infinitely *more agreeable*, becauſe the pleaſing aſpect of health had ſuperſeded the nauſeous effluvia of his diſeaſe. I now only en-

joined him to follow the ſame regimen and *abſtemious* mode of living for a month or two longer, taking the Tincture diluted in a glaſs of cold ſpring water once or twice a-day, as he might find himſelf inclined. This he rigidly attended to; and I have now the pleaſure to declare, that only nine large bottles of the Solar Tincture have reſtored this gentleman from the moſt dangerous and deplorable condition of a tainted and corrupted habit, to ſound health, and a renovated ſtate of the blood and juices.

A Tainted Habit in a State of Pregnancy.

This is the moſt ſhocking caſe my practice or experience ever produced. The patient was taken in labour, and in the act of parturition the child preſented its right arm, which ſeparated from the body while the operator was returning it into the womb. The life of the mother being deſpaired of, I was ſent for; when, on inſpection, I quickly perceived conception had taken place under an infected ſtate of one of the parents. I performed the reſidue of the operation myſelf, and brought away the fœtus without a farther ſeparation of the joints, but with great difficulty, ſince it was ulcerated and half rotten with diſeaſe. By a moſt tender and judicious treatment of the woman, aſſiſted by the Lunar Tincture, her life was preſerved; and in the ſpace of five weeks ſhe appeared to have regained her health and ſtrength; when, to the aſtoniſhment of every one, ſhe fell into a violent ſalivation. Being ſent for upon this ſingular occaſion, I thought it right to interrogate the huſband; when, after a vaſt deal of heſitation and diſſembling, he confeſſed having

ing had connection with his wife under a venereal infection; and with a view to prevent the conſequences, he had prevailed on her to ſwallow ſtrong doſes of mercury, which I have reaſon to ſuppoſe lay dormant in the body until after her delivery; when the efforts of nature being no longer directed to the preſervation of the child, ſuffered the mercury to attack the ſalival glands, and to produce the effect we have juſt deſcribed. I ordered her a ſpare but nouriſhing diet; worked off the mercury in the cuſtomary way, and then began a courſe of the Solar Tincture. A table-ſpoonful, in an equal quantity of warm water, was taken four times a-day for the firſt week; then three time a-day until the end of the month; afterwards twice a-day in cold ſpring-water for a month longer; and then once or twice a-day, or every other day, as the patient found convenient; by this means ſhe happily experienced a complete cure in leſs than three months, and now enjoys a perfect ſtate of health, deſirous of certifying the fact to any unfortunate female, who, under ſimilar circumſtances, wiſhes to call upon me for that purpoſe. Indeed every woman, who has the misfortune to ſuſpect even the ſmalleſt taint of a ſimilar nature to be lurking in her blood, ſhould put herſelf under a courſe of the Solar Tincture, and perſiſt in it every night and morning, in the quantity of a table-ſpoonful diluted in a wine-glaſs of cold ſpring-water, during the whole nine months ſtate of pregnancy.

The above caſe brings to my recollection a very ſingular inſtance of an accidental ſalivation, brought upon

upon a young lady by a foreign ſubſtance irritating one of the parotid glands; the particulars of which I ſhall here inſert for the ſake of thoſe who may happen to be under ſimilar circumſtances.—The lady was about the age of ſixteen, and of a delicate habit, when ſhe perceived the beginning of a diſeaſe which brought on an inceſſant ſpitting. By ſo large and conſtant an evacuation, her ſtrength became extremely impaired, and the moſt efficacious medicines proved uſeleſs. She had taken large quantities of the Peruvian bark, fœtid gums, opium, amber, alum, and the Neville-Holt water, and a gently opening medicine had now and then been interpoſed. But, all theſe attempts proving abortive for the ſpace of two years, it appeared to her phyſician, Sir George Baker, unreaſonable to expect relief from any internal medicines. He now conceived a ſuſpicion, that ſome extraneous body had accidentally found its way into the *meatus auditorius*, and might poſſibly be the cauſe of this extraordinary ſecretion, by keeping up a continued irritation in the parotid glands. With this view he examined her ears, when to his ſurpriſe, he found in them a quantity of fœtid wool. How, or when it came thither, no account could be given. To this ſubſtance he attributed the ſalivation, notwithſtanding that the diſeaſe did not immediately abate on the removal of the wool. It ſeemed therefore expedient to introduce ſome other habit, in the place of the increaſed ſecretion of ſaliva; and with this intention, he prevailed on the patient to chew perpetually a little dry bread, and ſwallow it with her ſpittle.

In

In a few weeks, it became neceſſary for her to chew the bread only at certain hours in the day; and thus, after two months, ſhe became entirely free from a moſt diſguſtful and tedious diſorder.

Tabes Dorsalis, or Consumption of the Back.

A young gentleman, about twenty-two years of age, applied to me in the above diſorder, which had worn him down to a mere ſkeleton. The tabes is ſeldom diſtinguiſhed by any remarkable fever, cough, or difficulty of breathing; but it is attended with want of appetite, a weak digeſtion, and a morbid ſtate of the blood, whence the body grows languid, and waſtes by degrees. Sometimes this ſpecies of conſumption is brought on by a venereal ulcer; but it moſt commonly proceeds from exceſſive evacuations of the ſemen, which was the caſe with this patient. He had too early addicted himſelf to an intercourſe with lewd women, which eventually brought on an involuntary ſhedding of the ſeed, which came from him on the leaſt exertion, whether of walking, riding, lifting a weight, or even of pulling off his clothes. I ordered him a ſtrong nutricious diet, with a table-ſpoonful of the Solar Tincture four times a-day, in the ſame quantity of warm water, which he purſued for a month. He found his ſtrength was ſo much recovered, that I could ſafely adviſe moderate exerciſe both on horſeback and on foot. The gleet, however, was uncommonly obſtinate; and the Tincture was continued for the ſecond month

month in the ſame quantity. By this time the parts were conſiderably braced; he could run or jump without perceiving the ſmalleſt emiſſion: and the healthy colour of his cheek began to return. He now perſiſted in the tincture, only three times a-day, for a month longer; after which the doſe was reduced to night and morning for another month; he then took it twice a-day for two months more, at the end of which period every ſymptom of the complaint was removed, he had fully recovered his fleſh and ſtrength, and now preſerves it by taking the Solar Tincture as a beverage, made after the manner of brandy and water. This diſorder has in general been deemed incurable. It is true, that, even in its early attacks, it is ſo eſſentially neceſſary to abſtain from venereal embraces, that, without it, the beſt remedies will prove altogether uſeleſs; hence the tabes dorſalis ſo often proves mortal, becauſe the patient has ſeldom reſolution enough to diſpenſe with his amours.

Rheumatic Gout.

This diſeaſe is generally brought on by alternate heats and colds in the blood, whereby a humour is produced, which attacks the joints and muſcles, ſometimes accompanied with diſcolorations and ſwellings, and at other times without either; but it is always attended with excruciating pain. Mr. John Brandham, of Bridlington Quay, was attacked in this manner; when, after ſome time, the ſevere pain of his joints, falling into his legs and thighs, deprived

him of the uſe of his limbs, and confined him entirely to his bed. He was ſoon after ſeized with a violent pain in his head and ſtomach, which ſo much affected his reſpiration, that inſtant death was expected. In this extremity, half a wine-glaſs of the Solar Tincture was adminiſtered, *undiluted*, which removed the danger, and gave his ſtomach immediate eaſe. A table-ſpoonful, in the ſame quantity of warm water, was then given every third hour, during the ſucceeding day and night, by which the pains were conſiderably abated. He continued the medicine four times a-day for a month longer; at the expiration of which time he experienced a perfect cure, and has never ſince found the ſmalleſt return of his complaint; of which he is deſirous of ſatisfying any enquirer, who chuſes to apply for that purpoſe.

AGUES, CONVULSIONS, CHOLIC, BLOODY-FLUX, AND VIOLENT SPASM IN THE STOMACH AND HEAD.

During the fit, let one or two table-ſpoonfuls of the Solar Tincture, *undiluted*, be adminiſtered ſucceſſively, as the extremity of the caſe may require; and afterwards let the patient continue the medicine, night and morning, in the quantity of a table-ſpoonful in a wine-glaſs of warm water, or oftener, as the obſtinacy of the caſe may render neceſſary, and in a very ſhort time, a perfect cure will be experienced; a few inſtances of which I ſhall add, in the words of thoſe who have tranſmitted me the facts.

To

To E. Sibly, M. D.

Sir,---A few nights ago, I was attacked in bed with a violent pain in my ſtomach and bowels, which alternately produced ſuch a ſucceſſion of convulſive ſpaſms and cold chills, that I really thought I was ſeized for death. Fortunately a bottle of your Solar Tincture was in the houſe, purchaſed the day before by my ſon, of which my ſervant gave me a table-ſpoonful and a half, unmixed with water. The inſtant effect it had on my ſtomach I can only compare to electricity; for, to the aſtoniſhment of all about me, the ſpaſms inſtantly ceaſed, a gentle perſpiration came on, in which ſtate I fell aſleep, and did not awake till the morning, when I found myſelf entirely free from pain. On getting up, I took a ſpoonful more of the Tincture, in an equal quantity of warm water, and have not ſince experienced the ſmalleſt return of the diſorder. Requeſting you will make this known, for the benefit of others, I remain, with grateful eſteem, &c.

No. 25, *Philpot-lane*, M. Armstrong.
Fenchurch-ſtreet, *Feb.* 12, 1795.

To E. Sibly, M. D.

Sir,---In gratitude, I cannot but thank you for that excellent medicine, the Solar Tincture. It has ſaved my life. I was ſuddenly ſeized with a violent cholic, which brought on a mortification of the bowels. The efforts of the faculty were tried in vain, and I was given over. In theſe moments of extremity,

my exiſtence was preſerved by only two ſpoonfuls of your medicine, *undiluted*, which inſtantly relieved me from the rack of torture. After two more doſes, the obſtruction was removed by natural evacuation, and in a few hours reſtored me to my uſual ſtate of good health. I entreat you to publiſh this for the public good, and ſhall be ever gratefully your's,

Clifton, near Briſtol, JOHN POWELL.
March 25, 1795.

To E. SIBLY, M. D.

SIR,---Actuated by a principle of gratitude, I cannot omit acquainting you of an extraordinary cure performed on me by means of your Solar Tincture. I had for ſome time been afflicted with the dyſentery or bloody flux, and was reduced to a very weak and languid ſtate, without deriving any benefit from the preſcriptions of the faculty. This induced me to make trial of your Solar Tincture; when, after taking only two ſmall bottles, I found myſelf perfectly recovered; therefore, by publiſhing this to the world, you will confer a favour on your grateful, &c.

No. 8, *Windmill-ſtreet,* WILLIAM JACKSON.
Tottenham-court Road, May 15, 1795.

DISEASES OF THE BREAST AND LUNGS, ASTHMA, DROPSY, OR CONSUMPTION.

Take one ſpoonful of the Tincture, night and morning, for twenty days ſucceſſively, diluted in two ſpoonfuls of cold ſpring-water; then reduce it to the ſame

ſame doſe every other day, which will in general remove the malady in the courſe of the month; but, if the dropſy or conſumption have been far advanced, it will be neceſſary to continue the medicine for one, two, or even three, months longer, reducing the number of doſes in proportion as health and ſtrength appear to return, and as the blood ſhall have reſumed its proper conſiſtency, and a briſker circulation. In theſe complaints, it will not be amiſs to take the Tincture in a tumbler of warm water, as a beverage, for ſome time after the cure is perfected, as it will infallibly prevent the blood from returning to its watery and impoveriſhed ſtate, and will rarify and expel the viſcid coheſions in the pulmonary veſſels. In theſe diſorders, the Solar Tincture may be ſafely adminiſtered to females even during obſtructions of the catamenia, as hath lately been experienced by perfecting an admirable cure on a lady in Grafton-ſtreet, Tottenham-court Road.

This lady was afflicted with obſtructions of the liver and ſpleen, inſomuch that ſhe could not walk up one pair of ſtairs without much pain, and ſhortneſs of breath. Her menſes were obſtructed; and twice or thrice a-day ſhe was attacked with aſthmatic ſpaſms, accompanied with febrile ſymptoms. This affliction being of a particular nature, I was obliged to preſcribe both the Solar and Lunar Tinctures, in the following manner. Whenever the fever came on, ſhe took a doſe of the Solar Tincture; and, every morning and evening, ſixty drops of the Lunar

Tincture

Tincture in a gill of mugwort tea; and in twenty-one days ſhe was perfectly recovered, and reſtored to her uſual colour and vivacity, to the great joy of her parents and friends.

Mental Depression, or Lowness of Spirits.

This may be conſidered the primary diſorder of the nervous train; and, if reſiſted in time, may, in moſt caſes, be eaſily cured. For this purpoſe take a table-ſpoonful of the Solar Tincture, diluted in a wine-glaſs of cold ſpring-water, every forenoon at eleven or twelve o'clock, for fourteen ſucceſſive days; then uſe it every two or three days for a month; and the complaint will be entirely removed, as all patients will ſenſibly feel, by their alertneſs, activity, and unuſual flow of natural ſpirits; of which the following caſe may ſerve as an example:

To E. Sibly, M. D.

Sir,—From a full conviction of the efficacy of your Solar Tincture, I cheerfully come forward to inform you, that having been much afflicted with depreſſion of ſpirits, a nervous tremour, and palpitation of the heart, (owing, I believe, to cloſe application to ſtudy, and much profeſſional duty,) I have lately experienced a perfect cure, by taking one large bottle of your medicine. Impreſſed, therefore, with a ſenſe of gratitude to God and you, and having a certain knowledge of many other cures performed by your Tincture, I do hereby requeſt this

this may be made public for the benefit of the afflicted, and am, with eſteem, &c.

Borough, Southwark, W. WOOLLEY, M. A.
May 10, 1795.

BILE ON THE STOMACH.

All bilious complaints are removed by the Solar Tincture in a moſt extraordinary manner. Whenever a fit appears to be coming on, with the ſtomach loaded and oppreſſed, one large table-ſpoonful, taken in the ſame quantity of warm water, will in ten minutes carry off the offending matter, cleanſe and comfort the digeſtive organs, and give the patient immediate relief.

BITE OF A MAD DOG, OR ANY VENOMOUS REPTILE.

The fatal diſeaſe conſequent on the bite of a mad dog, is the hydrophobia, or *dread of water;* which circumſtance firſt ſuggeſted dipping in the ſea for the cure, by antipathy. It is very remarkable that theſe patients have not only a dread of water, but of every thing bright and tranſparent. Soon after this affection takes place, the mind becomes impaired; which ſhews that the poiſon is carried through the blood to the nervous fluid, and thence to the brain. Dr. James, in his Treatiſe on Canine Madneſs, mentions a boy ſent out to fill two bottles of water, who was ſo terrified by the noiſe of the liquid running into them, that he fled into the houſe crying out

that he was bewitched. He mentions alſo the caſe of a farmer, who going, to draw ſome ale from a caſk, was terrified to ſuch a degree at its running into the veſſel, that he ran out in great haſte with the ſpigot in his hand. But, in whatever manner this ſymptom comes on, it is certain that the moſt painful ſenſations accompany every attempt to ſwallow liquids. Nay, the bare ſight of water, of a looking-glaſs, or any thing clear and pellucid, will give the utmoſt uneaſineſs, and even throw the patient into convulſions. In this diſeaſe there ſeems to be an extreme ſenſibility and irritability of the nervous ſyſtem. The eyes cannot bear the light, or the ſight of any thing white; the leaſt touch or motion offends them, and they want to be kept as quiet and in the dark as poſſible. Some complain of the coldneſs of the air, frequently when it is really warm. Others complain of violent heat; and have a great deſire for cold air, which yet never fails to increaſe the ſymptoms. In all there is a great flow of the ſaliva into the mouth; which is exceedingly troubleſome to the patients, as it has the ſame effect upon their fauces that other liquids have. This, therefore, they perpetually blow off with violence, which in a patient of Dr. Fothergill's occaſioned a noiſe not unlike the hollow barking of a dog, and which he conjectures might have given riſe to the common notion that hydrophobious patients bark like dogs. They have an inſatiable thirſt; but are unable to get down any drink, except with the utmoſt difficulty; though

though ſometimes they can ſwallow bread ſoaked in liquids, ſlices of oranges, or other fruits There is a pain under the *ſcrobiculus cordis*, as in the tenanus; and the patients mournfully point to that place, as the ſeat of the diſeaſe. Dr. Vaughan is of opinion that it is this pain, rather than any difficulty in ſwallowing, which diſtreſſes the patient on every attempt to drink. The voice is commonly plaintive and mournful; but Dr. Vaughan tells us there is a mixture of fierceneſs and timidity in the countenance which he cannot deſcribe, but by which he could know a hydrophobious perſon without aſking any queſtions. Some ſeem to have at times a furious delirium, and an inclination to ſpit at or bite the by-ſtanders: while others ſhew no ſuch inclination, but will even ſuffer people to wipe the inſide of their mouths with the corner of a handkerchief, in order to clear away the viſcid ſaliva which is ready to ſuffocate them. In ſome male patients there is an involuntary erection of the penis, and emiſſion of the ſemen; and the urine is forced away by the frequent return of the ſpaſms. In a letter from Dr. Wolf, of Warſaw, to Henry Baker, F.R.S. dated Warſaw, September 26, 1767, we have the following melancholy account of the caſes of five perſons who died of the hydrophobia: None of them quite loſt their ſenſes; but they were all talking without intermiſſion, praying, lamenting, deſpairing, curſing, ſighing, ſpitting a frothy ſaliva, ſcreeching, ſometimes belching, and retching, but rarely vomiting. Every member is

convulſed by fits, but moſt violently from the navel up to the breaſt and œſophagus. The fit comes on every quarter of an hour; the fauces are not red, nor the tongue dry. The pulſe is not at all feveriſh; and when the fit is over nearly like a ſound pulſe. The face grows pale, then brown, and during the fit almoſt black; the lips livid; the head is drowſy, and the ears tingling; the urine limpid. At laſt they grow weary; the fits are leſs violent, and ceaſe towards the end; the pulſe becomes weak, intermittent, and not very quick; they ſweat, and at laſt the whole body becomes cold. They compoſe themſelves quietly as if to get to ſleep, and ſo they expire. A general obſervation was, that the lint and dreſſings of the wounds, even when dry, were always black, and that when the pus was very good in colour and appearance. In one of Dr. Wolf's patients who recovered, the blood ſtank intolerably as it was drawn from a vein; and one of Dr. Vaughan's patients complained of an intolerable fœtid ſmell proceeding from the wounded part, though nobody but himſelf could perceive it. In general, the violent convulſions ceaſe a ſhort time before death; and even the hydrophobia goes off, ſo that the patients can drink freely. But this does not always happen; for Dr. Vaughan mentions the caſe of a patient, in whom, "when he had in appearance ceaſed to breathe, the ſpaſmus cynicus was obſervable, with an odd convulſive motion in the muſcles of the face; and the ſtrange contrariety which took place in the action

action of theſe, produced the moſt horrid aſſemblage of feature that can well be conceived. Of this patient alſo it was remarkable, that in the laſt hours of his life he ceaſed to call for drink, which had been his conſtant requeſt; but was perpetually aſking for ſomething to eat."

The hydrophobia ſeems to be a ſymptom peculiar to the human race; for the mad animals which communicate the infection do not ſeem to have any dread of water. Notwithſtanding this, dipping is the common remedy for the cure of dogs and men. With regard to the ſymptoms of madneſs in dogs, they are very equivocal; and thoſe particularly enumerated by ſome authors, are only ſuch as might be expected in dogs much heated or agitated by being violently purſued and ſtruck. One ſymptom indeed, if it could be depended upon, would determine the matter; namely, that all other dogs avoid and run away from one that is mad; and even large dogs will not attack one of the ſmalleſt ſize who is infected with this diſeaſe. Upon this ſuppoſition they point out a method of diſcovering whether a dog that hath been killed was really mad or not; namely, by rubbing a piece of meat along the inſide of his mouth, and then offering it to a ſound dog. If the latter eats it, it is a ſign the dog was not mad; but, if the other rejects it with a kind of howling noiſe, it is certain that he was. Dr. James tells us, that among dogs the diſeaſe is infectious by ſtaying in the ſame place; and that, after a kennel has been

once infected, the dogs put into it will be for a conſiderable time afterwards in danger of going mad alſo. A remedy for this, he ſays is, to keep geeſe for ſome time in the kennel. He rejects as falſe the opinion that dogs when going mad will not bark; though he owns that there is a very conſiderable change in their bark, which becomes hoarſe and hollow.

With regard to the immediate cauſe among mankind, there is not the leaſt doubt that the hydrophobia is occaſioned by the ſaliva of the mad animal being mixed with the blood. It does not appear that this can operate through the cuticula; but, when that is rubbed off, the ſmalleſt quantity is ſufficient to communicate the diſeaſe, and a ſlight ſcratch with the teeth of a mad animal has been found as pernicious as a large wound. It is certain alſo, that the infection has been communicated by the bites of dogs, cats, wolves, foxes, weaſels, ſwine, and even cocks and hens, when in a ſtate of madneſs. But it does not appear that the diſtemper is communicable from one hydrophobious perſon to another, by means of the bite, or any other way.

It has been generally allowed by practitioners, that, though the hydrophobia may be prevented, yet it can ſeldom be cured after it has made its appearance. The moſt eſſential part of the treatment therefore depends on an immediate uſe of the proper means of prevention. For this purpoſe ſome adviſe the inſtant cutting out the part bitten, which muſt

muſt certainly be an effectual mode, provided we could be ſure the poiſon had not reached beyond the wound. When, however, we conſider the rapidity with which the blood and juices flow, it ſeems impoſſible we can ever wholly depend on ſuch an operation. I ſhould nevertheleſs adviſe it to be done; after which let the part be well ſoaked with the Solar Tincture; and, to fortify the blood, let the patient ſwallow a table-ſpoonful every three hours, *undiluted*, for the firſt day; and the ſame doſe night and morning, for a month following. Let the part be again ſoaked with the Tincture four times a-day, for three or four days; and I am ſatisfied a ſafe and perfect cure may be relied on. For the bite of adders, ſnakes, &c. bathing the part, and taking the medicine *undiluted*, will counteract the virulence of the poiſon, and preſerve the patient from further injury.

Gun-Shot Wounds, Cuts, Stabs, &c.

Gentlemen in the army and navy, and all perſons liable to gun-ſhots, ſtabs, wounds, &c. ſhould never be without the Solar Tincture. Its ſalutary effects on the blood in all theſe caſes are really ſurpriſing. It totally prevents, and will even ſtop, mortification, in very advanced ſtages. It quickly ſupplies the greateſt loſs of blood; fortifies the heart, cheriſhes the vital organs, and heals and unites the fleſh in an uncommon degree. If taken internally, and poured at the ſame time into the wound, it is quick-

ly

ly propelled through the heart, by the veins and arteries, and thus renovates the exhauſted ſpirits, and preſerves life. Its effect on a few ſimple wounds may be ſeen in the following caſes:

To E. Sibly, M.D.

Sir,—For the ſake of thoſe who are liable to accidents, I think it right to inform you of a moſt remarkable cure performed by your Solar Tincture, on a very deep and dangerous wound made on Mrs. Cook by a caſe-knife, of more than the depth of my fore-finger. After trying every means in vain to ſtop the blood, I ſent for a bottle of your Solar Tincture, and well bathed the wound therewith. The blood and Tincture readily aſſimilated, and formed a cruſt on the orifice of the wound, which very ſoon ſtopped the effuſion of blood. But what is moſt remarkable, the wound was completely healed in leſs than ſix days, and is now ſo perfectly cloſed as to be almoſt imperceptible. You are welcome to publiſh this, and in ſo doing you will oblige, &c. William Cook.

Seymour-ſtreet, Portland ſquare.

April 14, 1795.

To E. Sibly, M.D.

Sir,—In juſtice to my own feelings, I cannot but acquaint you with a cure performed by your Solar Tincture, in a very uncommon manner. As I was travelling in the ſtage to Boxley Abbey, near Maid-

ſtone,

ſtone, in Kent, a gentleman, who ſat next me, putting his head out of the window, received a violent cut acroſs the eye with the coachman's whip, which produced an immediate ſwelling and inflammation, attended with ſo much agony, that he declared the pain was inſupportable. I had purchaſed a bottle of your Solar Tincture while in town, knowing it had performed many ſurpriſing cures in my neighbourhood. This I immediately opened, and applied to the inflamed part; and, after waſhing the eye well with it, I bound a white handkerchief tight over it, wetted with the Tincture. In leſs than ten minutes the anguiſh was greatly aſſuaged; and in the courſe of three hours it was quite well. The gentleman expreſſed the utmoſt aſtoniſhment at the celerity of the cure, as did every paſſenger in the coach. I wiſh this to be made as public as poſſible, for the benefit of thoſe who are liable to accidents; and am with reſpect, &c. M. STABLES.

I ſhall only remark further, with reſpect to wounds, bruiſes, &c. that a ſhort time ago, as a coach was driving furiouſly out of Cavendiſh-ſquare, the horſes unfortunately beat down a girl of eight years of age, the daughter of Robert and Elizabeth Larkin, of Clipſton-ſtreet; and the wheels paſſing over her body, ſhe was taken up to all appearance dead. The ſpectators were for carrying her immediately to the hoſpital; but the accident happening very near my houſe, I was ſent for. I avoided letting

blood, but bathed the bruiſed parts thoroughly with the Solar Tincture, and introduced half a ſpoonful, *undiluted*, into her ſtomach. It was now about nine o'clock at night. She was compoſed and aſleep before ten, being overcome by the medicine. A ſpoonful more of the Tincture was given her at different periods of the night, the ſudorific powers of which brought on a plentiful perſpiration. At ten o'clock the next morning ſhe awoke, and got up, and was ſo well recovered as to be able to play about with her companions, in all reſpects the ſame as if nothing had happened. The girl, and her parents, are pleaſed with every opportunity of recounting the circumſtances of this event to any enquirers.

MORE RECENT CASES.

To E. Sibly, M. D.

Sir,---Thinking it a duty due to you, to acknowledge benefits received through your means, and deſirous that ſociety ſhould partake of ſimilar benefits, I take the liberty to communicate the following circumſtance: My brother, Benjamin, about eight years of age, was bit by a dog, in the leg; and, from the condition of the animal, it was ſuppoſed to be mad. My parents, much alarmed and diſtreſſed, ſent my brother to Mr. Chamberlain, the druggiſt, who lives in the ſame ſtreet; he applied the Solar Tincture to the wound, repeatedly well bathing the part, and he has been quite well ever ſince.

ſince. The dog that bit my brother, bit another boy in the hand immediately after: the parents of the boy applied to medical men, of the greateſt reputation in this town, who ordered ſea-bathing; but this was of no uſe to him, for he died in leſs than two months, raving mad.

I am happy to ſay, that although it is nearly two years ſince the accident happened to my brother, the ſlighteſt ſymptom of the hydrophobia has not appeared. In juſtice, therefore, to you, and for the benefit of ſociety at large, you may make what uſe you pleaſe of this letter; and any perſon applying to me, may be certified of the truth from my own hands. For the preſent, Sir, I ſubſcribe myſelf, your's, in perfect eſteem, JAMES BUDD, Jun.

No. 14, *Butcher-ſtreet, Portſea-town,*
July 24, 1798.

CASE.

Mr. Carey, caulker, reſiding in Unicorn-ſtreet, Portſea, Hants, was afflicted by epileptic fits, which were always preceded by vertigo, a pallid countenance, a difficulty of reſpiration, and the abdomen tumid with flatulencies to an amazing degree; and when ſeized, violently agitated by trembling and foaming at the mouth, as well as a total deprivation of the ſenſitive faculties. Theſe fits returned upon the patient, at ſtated periods, every three or four months, for many years, and confined him to his

room from three to ſeven weeks at a time. Upon aſking medical advice, all the hopes he could gain from the faculty was, *that his caſe was beyond the help of medicine.* A friend, however, who went for the purpoſe of ſitting up with him during his extreme malady, one night as one of the fits had juſt ſeized upon him, having ſome of the Solar Tincture by him, reſolved to try its efficacy, and, having given the patient two table-ſpoonfuls in the courſe of an hour, the epilepſy vaniſhed; and, continuing the medicine for a few months afterwards, he has not been attacked with the leaſt ſymptom ever ſince, which was in 1796; though previouſly to that period he was never free from the moſt violent attacks of the diſorder.

CASE.

Mrs. Stockman, Queen-ſtreet, Portſea, by want of prudent management during her lying-in, caught a violent cold, which ſettling upon her lungs, the viſcera were affected, and cauſed a total relaxation of all the ſeminal veſſels, which ſo much debilitated the whole frame, that the ſolids were in the moſt impoveriſhed ſtate; ſhe was advancing very faſt towards the laſt ſtage of a conſumption; medical aſſiſtance ſeemed to be baffled, and hope was rendered vain; when, by taking only three bottles of the Solar Tincture, ſhe was perfectly recovered, and is now likely to be the happy mother of a numerous iſſue.

CASE.

CASE.

Mrs. Dubois, a widow lady, at No. 5, Portland ſtreet, Soho, of the age of eighty-five years, in the month of January, 1724, was afflicted with a peripneumony on the lungs, attended with a pain between the ſcapulæ, a violent cough, a weight and diſtention of the præcordia, a loathing of food, an intermitting pulſe, a frothy, but ſometimes yellow, matter expectorated by coughing; and, when ſhe lay on her ſide, in danger of being ſuffocated; her extremities cold, and the nails of the fingers became livid, with little or no ſleep. After making uſe of many medicines to no purpoſe, ſhe heard of the reanimating properties of the Solar Tincture, and I was applied to for my aſſiſtance. Although her extreme age was ſuch, that little could be expected from common medicines, yet, knowing the virtues of the Solar Tincture as the pabulum, or food, of life, I readily preſcribed half a table-ſpoonful, diluted with an equal quantity of water, to be given every three hours; but to be augmented the ſecond day to a table-ſpoonful. This produced the deſired effect, and brought on a profuſe expectoration, and diſpelled the uneaſineſs of her reſpiration; her urine was diſcharged more copiouſly, and with much ſediment; her fæces were moderately lax, her appetite conſequently returned, and I had the pleaſure to find, after ſhe had taken four bottles, that her vital heat increaſed, her ſpirits were invigorated, and the whole functions of her body reſtored to their uſual

ſtrength. She is now a living teſtimony of the aſtoniſhing powers of this ſingularly prolific medicine.

Auguſt 2, 1797.

CASE.

To E. Sibly, M.D.

Sir,—To continue ſilent after the many extraordinary inſtances of ſucceſs I have witneſſed from your truly valuable Solar Tincture, would be the extreme of ingratitude; a conduct I would earneſtly deſire to avoid.

In my own family, Sir, I have occaſionally uſed it for the laſt three years, and have derived infinite ſatisfaction from the ſucceſs attendant upon my recommendation of it to others. In fits, and bowel complaints (particularly incident to children), I have, on adminiſtering the Tincture, found almoſt inſtant relief; nor is it leſs efficacious in the whooping-cough. I was induced to uſe it, for this truly diſagreeable malady, by your having, in your ſhort Treatiſe, deſcribed it as being a cleanſer of the lungs, viſcera, &c.

This reminds me of a very ſingular inſtance of ſucceſs which occurred about two months ago: The child of one of my neighbours was ſorely attacked by a violent cold, which terminated in an inflammation on its lungs; an apothecary of great reſpectability attended it, and, to my knowledge, gave up all hopes of ſaving the child's life. In the awful in-

terval

terval of extreme apprehenſion and ſlender hope, a tea-ſpoonful of Tincture, with as much water, was given her; this ſoon occaſioned the child to open its eyes, which ſhe had not done for two days preceding. Encouraged by this circumſtance, I earneſtly recommended a further ſupply, one tea-ſpoonful of Tincture to two of water, every two hours. In a very ſhort time the danger was over; the child now lives in apparent health and ſtrength. If the atteſtation of the parents will, in your opinion, tend to increaſe the knowledge of the Tincture's efficacy, they will moſt gratefully come forward, whenever you pleaſe. As a ſtyptic it is invaluable; and in violent bruiſes and contuſions, one trial only will be ſufficient. Having been in no one inſtance diſappointed, when properly adminiſtered, I already anticipate much pleaſure in trying its *reanimating powers* on animals, agreeably to your hints in the Treatiſe. With the moſt earneſt wiſhes for the general extenſion of this uſeful medicine, I remain, Sir, &c. T. BENNET.

N.B. A medical friend of mine, in Eſſex, writes me word, that he has uſed the Tincture with much ſucceſs in agues. As he has laid aſide his former prejudices againſt it (by candidly trying its powers), I hope and expect that he will be of great ſervice to the afflicted, by his recommendation.

Eaſt-ſtreet, Kennington,
June 20, 1798.

CASE.

CASE.

A nobleman of very high rank in this country, called in my aſſiſtance to the relief of his lady, who experienced the utmoſt degree of *laſſitude*, and *frequent abortion*. She was attacked with pains of the ſtomach in the morning, which, deſcending to the lower extremities, haraſſed her with intenſe pain and extreme languor; ſhe was alſo troubled with flatulencies and depreſſion of ſpirits till about midday, when her conſtitution, naturally pure, reſiſted the complaints, and relieved her till about nine or ten o'clock in the evening, when her ladyſhip's malady returned with redoubled wearineſs; the water appeared pale, with a ſediment; ſhe was attacked by nervous head-achs, and violent ſpaſms relaxed her whole frame; the fluor albus made an alarming appearance; her fleſh loſt its firmneſs; and although only in the TWENTY-FIRST year of her life ſhe unhappily experienced the ſenſation of *the infirmities of premature age*; her ſleep approached torpidity, except interrupted ſometimes by dreams; and, although her appetite appeared regular, ſhe had every ſymptom of hypochondriacal dejection. Theſe alarming indications of decay ſo agitated his lordſhip's feelings, that the regular practice, as well as a profuſion of *glutinous noſtrums*, had been tried for upwards of a year, and had obſtructed the capillary veſſels without any viſible relief; he applied to me, and earneſtly deſired my advice. Conceiving the lady's ſituation, though to appearance deſperate, not beyond

beyond the reach of the *invigorating* power peculiar to the *re-animating* SOLAR TINCTURE, I preſcribed the medicine to her ladyſhip; the firſt application of which produced the moſt extraordinary change for the better, and ultimately re-eſtabliſhed her in all the bleſſings of good health and a confirmed temperature of body. It may not be unneceſſary to add, that ſhe has ſince bleſſed this noble houſe with a ſon and heir.

July 10, 1798.

CASE.

SIR,—As an admirer of the improvements of medical philoſophy, I am induced to ſend you the following caſe, as a ſingular proof of the efficacy of your Solar Tincture, in contuſions:—Being alarmed by the ſhrieks of a child in the ſtreet, I enquired the cauſe, and found that his fingers were bruiſed by the ſudden jamming of the ſtreet door, ſo violently, that they appeared one preſſed pulp, with the blood forced out of every pore. I immediately applied the Tincture, and had the pleaſure to find the excruciating pain inſtantly to abate, and inſtead of being black, reſume their natural colour; and after a few applications, his fingers were perfectly recovered. I muſt beg leave to make a few obſervations on the virtue of the Tincture, from its ſimilar effects to vital air, in reſtoring ſuſpended animation, and renovating the vital principle, in a languid ſtate by diſeaſe, accidents, &c. The new diſ-

coveries in pneumatical chemiſtry have opened a field of knowledge which promiſes great improvements in the medical art, and accounts for many curious and uſeful phenomena in nature, which were before unknown. I could not but admire the effects of the Solar Tincture, in the above caſe, in preventing the bruiſed fingers turning black, as is the caſe in all bruiſes, and in every caſe where the circulation is prevented by ſuffocation, fits, &c. the lips, nails, and blood, turning black for want of a ſupply of oxygen, or vital air: the pain ceaſing on the application of the Tincture, may be from ſimilar effects, as by experiment we find, that when the ſkin is removed by bliſters, the common atmoſpheric air, being in contact, gives pain; but if the part is immerſed in factitious air, the pain inſtantly ceaſes. From the repeated trials of your Tincture, in different caſes, I find its renovating efficacy extended to admiration. I am, Sir, with reſpect, your's, &c. W. JACKSON,

Profeſſor of Medical Electricity.

No. 47, *Upper Rathbone-place,*
Auguſt 4, 1799.

CASE.

To E. SIBLY, M.D.

SIR,—I ſhould think it unpardonable in neglecting to inform you of the wonderful effect which your *Re-animating Solar Tincture*, this laſt week, has had

had on a child not two years of age, troubled with convulſions from its birth, which had contracted the muſcles of its arms and hands, and impaired its ſenſes, ſo that it appeared a poor diſtorted idiot.

The infant, in this condition, was carried by its mother to many medical gentlemen, who for ſeveral months tried a variety of means, without ſucceſs. In this ſtate it was brought to me, whereby it afford ed another ſtriking inſtance of the efficacy of your *Solar Tincture*. In this inſtance I applied it as uſual; and, to my aſtoniſhment, it exceeded my moſt ſanguine expectations; for the child had not taken more than one large bottle, in a doſe of two tea-ſpoonfuls, three times a-day, or as often as the fit appeared approaching, when it perfectly recovered, with the uſe of its ſenſes, hands, and arms, to the no ſmall pleaſure of myſelf, the joy of the mother, and to the credit of your medicine. I am, Sir, reſpectfully your's,

J CHAMBERLAIN,
Chemiſt and Druggiſt.

Butcher-ſtreet, Portſea, Hants,
Sept. 12, 1799.

OF THE PRINCIPLES OF LIFE AND DEATH.

ABOVE all, the efficacy of the Solar Tincture is moſt ſtrikingly manifeſted, by its ſtimulating and reanimating powers, in caſes of accidental or ſudden death. Life denotes the animated ſtate of nature; and, in human beings, exiſts as long as an union of the ſoul and body laſts. With us, therefore, life continues, until ſuch ſeparation has really taken place; which can no more be ſaid to have happened during the paroxyſm of a fit, or of a blow, which for a time deprives us of ſenſation, or in the *early* period of an unnatural or ſudden death, than during the time we are aſleep. It is the want of proper ſkill at ſuch times that too often occaſions death to take place, when life abſolutely exiſts in the blood, and might, with little care, have been preſerved. Death is therefore the act of ſeparation of the ſoul from the body; in which ſenſe it ſtands oppoſed to life, which conſiſts in the union thereof. An animal body, by the actions inſeperable from life, undergoes a continual change, and receives its diſſolution by degrees. Its ſmalleſt fibres become rigid;

rigid; its minuter veſſels grow into ſolid fibres no longer pervious to the fluids; its greater veſſels grow hard and narrow; and every thing becomes contracted, cloſed, and bound up: whence the dryneſs, immobility, and extenuation, obſerved in old age. By ſuch means the offices of the minuter veſſels are deſtroyed; the humours ſtagnate, harden, and at length coaleſce with the ſolids. Thus are the ſubtileſt fluids in the body intercepted and loſt, the concoction weakened, and the reparation prevented; only the blood continues to run ſlowly through the greater veſſels, aſſiduous to preſerve life, even after the animal functions are deſtroyed. At length, in the proceſs of theſe changes, death becomes inevitable, as the neceſſary conſequence of life. But it is rare indeed that life is thus long protracted, or that death ſucceeds merely from the natural decays and impairment of old age. Accidental diſeaſes, and our neglect of preſerving health, cut the work ſhort.

The ſigns of death are often very uncertain. If we conſult what Winſlow or Bruchier have ſaid on this ſubject, we ſhall be convinced, that between life and death the ſhade is ſo very undiſtinguiſhable, that even all the powers of art can ſcarcely determine where the one ends and the other begins. The colour of the viſage, the warmth of the body, and ſuppleneſs of the joints, are but uncertain ſigns of life ſtill ſubſiſting; while, on the contrary, the paleneſs of the complexion, the coldneſs of the

body, the ſtiffneſs of the extremities, the ceſſation of all motion, and the total inſenſibility of all the parts, are but uncertain marks of death begun. In the ſame manner alſo, with regard to the pulſe and breathing; theſe motions are ſo often kept under, that it is impoſſible to perceive them. By bringing a looking glaſs near to the mouth of the perſon ſuppoſed to be dead, people often expect to find whether he breathes or not. But this is a very uncertain experiment: the glaſs is frequently ſullied by the vapour of the dead man's body; and often the perſon is ſtill alive, though the glaſs is no way tarniſhed. In the ſame manner, neither noiſes in the ears, nor pungent ſpirits applied to the noſtrils, give certain ſigns of the diſcontinuance of life; and there are many inſtances of perſons who have endured them all, and afterwards recovered without any external aſſiſtance, to the aſtoniſhment of the ſpectators. This ſurely ought to be a caution againſt haſty burials, eſpecially in caſes of ſudden death; for it is ſhocking to reflect that ſome hundreds of valuable members of ſociety are annually torn from their diſconſolate families, by ſome accidental ſudden cauſe, and hurried thoughtleſsly to the grave, in whom the principles of life were capable of being revived! This lamentable truth has been eſtabliſhed by the happy ſucceſs of the Humane Society, from whoſe laudable exertions ſeveral hundred perſons have been reſtored to life, who, to all viſible appearance *were paſt recovery*. Every age and coun-

try

try affords ſome inſtances of perſons having been recovered, even after lying long for dead; and from the number of thoſe preſerved by mere lucky accidents, it is evident that ſtill greater numbers might be ſaved by timely pains and ſkill. Thoſe who have contemplated the ſtructure of the human machine, know that its diſſolution cannot *naturally* happen but by the gradual decay of the whole ſyſtem above deſcribed, when the veſſels are become impervious to fluids, the circulation weakened and deſtroyed, and the vital organs no longer able to perform their office. But, when their functions are merely ſuſpended by ſome ſudden ſhock, it may be likened to the ſtate of a watch ſtopped by a fall, which reſumes its motion the inſtant that injury is repaired. In the animal œconomy, "*the BLOOD is the LIFE;*" therefore, if its circulation be ſuſpended or deſtroyed, death follows. The ſhocking caſe of Mr. Groundwater, who was moſt inhumanly murdered on the 23d of May 1794, by the convicts in Cumberland Fort, near Portſmouth, manifeſts the TRUTH of this remark. The above unfortunate perſon was deputed to overlook the convicts in their working hours; when, having occaſion to reprimand two of them, namely, Francis Jenniſon and William Butterworth, who were under ſentence of tranſportation for life, they fell upon the unhappy man with the iron ſhovels with which they were at work; and, having thrown him down, they ſtruck the ſharp edge of the ſhovels ſeveral times

times into his head, whereby the cranium was penetrated, and ſo large a fiſſure made, that part of the brains hung upon the ſpade, and the reſidue fell out upon the ground, in the quantity of a double handful. They then ſtruck down one of the ſhovels on his neck, with an evident deſign to ſever the head from the body; but, ſtriking againſt the bone, it had not the intended effect. Now it is a moſt extraordinary circumſtance, atteſted by ſeveral witneſſes on the trial of theſe inhuman wretches, who were convicted of the murder at the enſuing Wincheſter aſſizes, and executed on the 4th of Auguſt, 1794, that Mr. Groundwater lived eighteen hours after he had received the above grievous wounds, and after the whole of the brain had fallen out of the cavity of the ſkull. He was entirely ſpeechleſs; but the action of the pulſe was remarkably ſtrong, and reſpiration viſibly continued, during the whole of the eighteen hours above-mentioned. This was poſitively atteſted on the oath of Mr. Hill, the ſurgeon who attended him, and taken down as a moſt ſingular caſe, by Sir Naſh Groſe, who tried the priſoners. This fact therefore clearly decides the long-conteſted point among phyſiologiſts, whether the ſeat of life is in the heart, or in the brain? for it evidently ſhews that the life is in the BLOOD, ſeated in its grand reſervoir the heart, which if ever ſo ſlightly wounded or impaired, the circulation ceaſes, and death inſtantly follows. Now it follows, that if the blood can be re-agitated,

and

and its circulation renewed, life will of neceſſity be reſtored. For this reaſon, whenever any accident has happened, by which ſudden death appears to have taken place, whether by blows, fits, falls, ſuffocation, ſtrangulation, drowning, apoplexy, convulſion-fits, thunder and lightning, aſſaſſination, duelling, or the like, let the unfortunate perſon be carried to a warm houſe, and laid by the fire, or put into a warm bed; let two or three table-ſpoonfuls of the Solar Tincture be introduced as early as poſſible into the ſtomach, and rubbed profuſely in by a warm hand, upon the ſpine of the back, loins, breaſt, and region of the heart, and poured into the wound, if there be any; the warm ſtimulating quality of the medicine, aſſiſted by the external heat and friction, will quickly rouſe the ſtagnant blood and juices, particularly in the grand reſervoir the heart, where, rarefying, preſſing every way, and being reſiſted by the valves, it will ſwell ſo as to fill the flaccid right auricle of the heart, which by the ſhock had become empty and at reſt; and thus, ſtimulating its fibres, will put them in motion. The right auricle, being thus filled and ſtimulated into contraction, fills the ventricle; which, by this means being irritated, likewiſe contracts and empties itſelf into the pulmonary artery; and the moment this is done the circulation begins again where it left off; and the lungs, being filled by the vital air contained in the medicine, begin to act, and life is reſtored, provided the organs and juices are in a fit

diſpoſition for it; which they undoubtedly are much oftener than is imagined. Nor is this ſtimulating action of the Tincture upon the heart at all ſurpriſing; for every medical man knows, or ought to know, that the heart, even when taken out of the body, if it be pricked with a pin, or hath warm water thrown upon it, will beat afreſh, and endeavour to exert its functions, though for ſome time before it had been motionleſs. No perſon therefore ought to be conſidered *dead*, until the energy of the blood is ſo far gone, that it can never again be agitated, ſo as to fill and ſtimulate into contraction the right *ſinus venoſus* and auricle of the heart.

When the patient is thus far recovered, he ought to be treated with great care and tenderneſs; and ſome warm milk, wine and water, elder-flower tea, or any nouriſhing ſpoon-meat, ſhould be given to him as ſoon as he appears capable of taking food. In ſome caſes it may be neceſſary to open the temporal artery and the external jugular, or to bleed in the arm; but this ſhould never be done if it can ſafely be diſpenſed with, as it certainly weakens the animal principle, which it is the firſt object of this medicine to ſtrengthen. Under different circumſtances, and as particular occaſions may require, the rules laid down in p 196 of my Engliſh Phyſician, and recommended by the Humane Society, will be found of conſiderable advantage. Above all, let me entreat an anxious perſeverance in this ſublimeſt of all virtues—the attempt to recover periſhing lives.

lives. Humanity calls for it in the moſt moving accents; and what can inſpire a good heart with more ſincere, perfect, conſcientious, and commendable, ſatisfaction, than a retroſpect of ſuch endeavours as have been generouſly exerted and ſucceſsfully contributed to recover, perhaps to reſtore, the life of a fellow-creature from the moſt deprecated calamity, ſudden death, with its alarming retinue of threatening conſequences to thoſe who die unprepared? ſince, by thus preſerving a ſinner to a future period, perhaps a ſoul may emerge in full maturity to felicity which ſhall have no end!

To demonſtrate the re-animating power of the medicine, experiments may be made upon a fowl, lamb, cat, dog, or other animal, by plunging them under water till they are apparently dead, or piercing them through the head, or any part of the body, except the heart; by ſuffocation, or an electrical ſhock; for ſudden death, howſoever it happens, whether by drowning or otherwiſe, is much the ſame as to its effects on the vital organs; conſequently they are all to be treated in a ſimilar manner.

Upon the whole it is evident, that by contemplating Nature in the economy and harmony of our ſtructure, both external and internal, we may quickly diſcern a proper line of conduct for the conſervation of health, and the prolongation of life; and we ſhall alſo perceive a more auguſt view of the marvellous works of divine wiſdom in the ſtructure of the human breaſt, than we ſhall perhaps

again find in the whole compaſs of the univerſe. The gift of health was evidently the deſign of our benevolent Creator in the conſtruction of our bodies; it is therefore no leſs our duty, than our intereſt, to preſerve this bleſſing to our lateſt moments, as the ſeaſoning which gives the reliſh to all our other enjoyments. To enumerate the various abuſes of health, which take place from our earlieſt infancy, particularly among the rich and gay, and which are continued through the ſucceeding ſtages of modiſh life, would fill a volume. Suffice it to obſerve, that they prevail more particularly among people who are the moſt highly poliſhed and refined. To compare their artificial mode of living with that of nature, would afford a very ſtriking contraſt, and ſupply an obvious reaſon why perſons in the lower orders of ſociety are generally the longeſt livers, and enjoy the beſt ſtate of health; and hence we are warranted to conclude, that a large proportion of the diſeaſes to which we are ſubjected, are produced by ourſelves.

Notwithſtanding this unaccountable abuſe of our health, yet the want of it unfits us for moſt of the common avocations of life, and is more eſpecially an enemy to the ſocial and humane affections, as it generally renders the unhappy ſufferer peeviſh and ſullen, diſguſted at the allotments of Providence, and apt to induce ſuicide, by ſuggeſting gloomy and ſuſpicious ſentiments of the Almighty. It obſtructs the free exerciſe and full improvement of

our reaſon, makes us a burden to our friends, and uſeleſs to ſociety. Whereas the uninterrupted enjoyment of health is a conſtant ſource of good humour, and good humour is a great friend to openneſs and benignity of heart; enables us to encounter the various ills and diſappointments of this world with more courage, or ſuſtain them with more patience; and, in ſhort, conduces much, if we are otherwiſe duly qualified, to our acting our part in every exigency of life, with more firmneſs, conſiſtency, and dignity. Therefore it imports us much to preſerve and improve the habit of its enjoyment, without which, every other external entertainment is taſteleſs, and moſt other advantages are of little avail. To this end, we ought above all things to cultivate prudence, temperance, ſobriety, fortitude, and equanimity of temper; for without a prudent care of the body, and a ſteady government of the mind, to guard the one from diſeaſe, and the other from the feuds of paſſion and prejudice, ſound health is unattainable. By temperance we enjoy the real gratifications of life, without ſuffering any conſequent inconvenience. Sobriety enables us to be content with ſimple and frugal fare, and protects us from the pain and diſgrace of intoxication. Fortitude enables us to bear thoſe infirmities which prudence and ſobriety cannot ſhun, and baniſhes all dread of imaginary evils from our thoughts. Equanimity of temper contributes greatly to the happineſs of life, as well as to the preſervation of health,

by preſerving the mind from anxiety and perturbation, and arming us againſt the calumnies and animoſities of human nature. Violent paſſions, and the exceſſes they induce, gradually impair and wear away the conſtitution; whilſt the calm and placid ſtate of a temperate mind, and the athletic exerciſes of the body, preſerve the natural functions in full vigour and harmony, and exhilarate the ſpirits, which are the chief inſtruments of action.

OBSERVATIONS ON SEA-BATHING.

THE prevailing faſhion, which obtains among all ranks and conditions of people, of aſſembling in crowds all the ſummer long, at watering-places, to bathe, by which cuſtom a number of individuals are every revolving year ſuddenly taken off, by cramps and ſpaſms upon the obſtructed viſcera; makes it extremely proper that ſome preparation ſhould be ſeriouſly attended to, before we haſtily and inconſiderately plunge into the ſea.

Immerſion in cold water is undoubtedly a cuſtom which lays claim to the moſt remote antiquity; indeed it muſt have been coeval with man himſelf. The neceſſity of water for the purpoſes of cleanlineſs, and the pleaſure ariſing from its application to the body, in hot countries, muſt very early have recommended it to the human ſpecies. Even the example of other animals was ſufficient to give the hint to man. By inſtinct many of them are led to apply cold water in this manner; and ſome, when

deprived

deprived of its uſe, have been known to languiſh, and even to die. But whether the practice of cold bathing aroſe from neceſſity, reaſoning, or imitation, is an inquiry of no importance; the moſt material buſineſs is to point out the advantages which may be derived from it, and to guard people from an unprepared and too haſty a uſe of it.

The cold bath recommends itſelf in a variety of caſes, and is peculiarly beneficial to the inhabitants of populous cities, who indulge in voluptuouſneſs, and lead ſedentary lives. In perſons of this deſcription the action of the ſolids is always too weak, which induces a languid circulation, a crude indigeſted maſs of humours, and obſtructions in the capillary veſſels and glandular ſyſtem. Cold water, from its gravity, as well as its tonic power, is well calculated either to obviate or remove theſe ſymptoms. It accelerates the motion of the blood, promotes the different ſecretions, and gives permanent vigour to the ſolids. Theſe important purpoſes are always moſt eſſentially anſwered by ſea-bathing; for ſalt-water ought to be preferred, not only on account of its ſuperior gravity, but likewiſe for its greater power of ſtimulating the ſkin, which promotes the perſpiration, and prevents the patient from catching cold.

It is neceſſary, however, to obſerve, that cold bathing is more likely to prevent, than to remove, obſtructions of the glandular or lymphatic ſyſtem. Indeed, when theſe have arrived at a certain pitch, they

they are not to be *eaſily* removed by any means. In this caſe the cold bath will only aggravate the ſymptoms, and hurry the unhappy patient into an untimely grave. It is, therefore, of the utmoſt importance, previous to the patient's entering upon the uſe of the cold bath, to determine whether or not he labours under any obſtinate obſtructions of the lungs or other viſcera; and where this is the caſe, cold bathing ought ſtrictly to be prohibited, until the paſſages of the lungs are cleanſed and opened, and every ſymptom of inflammation entirely removed.

In what is called a plethoric ſtate, or too great a fulneſs of the body, it is likewiſe dangerous to uſe the cold bath, without due preparation. In this caſe there is great danger of burſting a blood-veſſel, or occaſioning an inflammation of the brain, or ſome of the viſcera. This precaution is more eſſentially neceſſary to thoſe who live high, and are of a groſs habit. Yet it is very remarkable, that theſe are the people who reſort with the greateſt ardour to the ſea-ſide, and plunge into the water without the leaſt conſideration. No doubt they often eſcape without injury; but ſo many are inſtantaneouſly carried off by cramp, apoplexy, &c. that no ſanction can be given to the practice. On the contrary, no perſon ought to bathe, until the body has been previouſly prepared by ſome active ſtimulus on the blood and bowels.

Another claſs of patients, who ſtand peculiarly in need of the bracing qualities of cold water, is the nervous. This includes a great number of the male, and

almoſt

almoſt all the female, inhabitants of great cities. Yet even thoſe perſons ought to be cautious in uſing the cold bath. Nervous people have often weak bowels, and may, as well as others, be ſubject to congeſtions and obſtructions of the viſcera; and in this caſe they will not be able to bear the effects of the cold water. For them, therefore, and indeed for all delicate people, the beſt plan would be to accuſtom themſelves to its uſe by the moſt pleaſing and gentle degrees. They ought to begin at the warmeſt ſeaſon, and gradually uſe it as the cold increaſes, till at length the coldeſt will prove quite agreeable. Nature revolts againſt all ſudden tranſitions; and thoſe who do violence to her dictates, have often cauſe to repent of their temerity.

To young people, and particularly to children, cold bathing is of the utmoſt importance. Their lax fibres render its tonic powers peculiarly proper. It promotes their growth, increaſes their ſtrength, and prevents a variety of diſeaſes incident to childhood. Were infants early accuſtomed to the cold bath, it would ſeldom diſagree with them; and we ſhould ſee fewer inſtances of the ſcrophula, rickets, and other diſeaſes, which prove fatal to many, and make others miſerable for life. Sometimes, indeed, theſe diſorders render infants incapable of bearing the ſhock of cold water; but this is owing to their not having been early and regularly accuſtomed to it. It is however neceſſary here to caution young men againſt too frequent bathing; as I have known many

fatal

fatal conſequences reſult from the daily practice of plunging into rivers, and continuing there too long.

We would particularly recommend the uſe of the cold bath to all perſons of a debilitated conſtitution and relaxed fibre; for weakneſs of the back and reins, ſcrophula, ſwellings, and relaxations of the joints, and all nervous affections. For the ſedentary and ſtudious we would likewiſe recommend the ſame practice; as it will in ſome meaſure ſupply the place of exerciſe, and give tone and vigour to the muſcular ſyſtem; for there is not perhaps in the whole compaſs of the Materia Medica, a more powerful bracer than the cold bath. Yet its uſe ought to be adopted with the utmoſt precaution, and not before the circulating maſs has undergone a ſalutary preparation.

The moſt proper time of the day for bathing, is no doubt the morning, or at leaſt before dinner; and the beſt mode, that of quick immerſion. As cold bathing has a conſtant tendency to propel the blood and other humours towards the head, it ought to be a rule always to wet that part firſt, or as ſoon as poſſible. By due attention to this circumſtance, there is reaſon to believe, that violent head-achs, and other complaints, which frequently proceed from cold bathing, might be often prevented.

The cold bath, when too long continued in, not only occaſions an exceſſive flux of humours towards the head, but chills the blood, cramps the muſcles, relaxes the nerves, and wholly defeats the intention of bathing. Hence, by not adverting to th s circumſtance,

cumſtance, expert ſwimmers are often injured, and ſometimes loſe their lives before any aſſiſtance can be given. All the beneficial purpoſes of cold bathing are anſwered by one ſingle immerſion; and the perſon ought to be rubbed dry the moment he comes out of the water, and ſhould continue to take exerciſe for ſome time after.

It muſt be allowed by every phyſiologiſt, by every pretender to medical experience, that the principal preparation requiſite for ſea-bathing is, to be careful that the veins, arteries, nerves, and veſſels, of the whole body, are completely open, or at leaſt are free from any abſolute obſtruction. The action of the water upon the circulating ſyſtem is ſo great, that the blood, and all the animal juices, are propelled with ſuch aſtoniſhing rapidity through the body, that ſhould an obſtruction in the veſſels ſuddenly check their progreſs, a vein burſts, cramp enſues, or convulſive ſpaſms ſeize the vital parts, and either ſudden death, or a dangerous diſeaſe, is the natural conſequence.

From the experiments I have had ſuch frequent opportunities to make, I am warranted in recommending the Solar Tincture, as the moſt ſafe and moſt effectual medium, by which the veſſels of the human body can be perfectly and completely prepared to ſuſtain that ſevere ſhock which the whole ſyſtem is made to undergo by a ſudden immerſion in the cold bath. If it be taken, night and morning, in the quantity of a large table-ſpoonful

in a wine-glaſs of cold ſpring-water, for only one week before the cold bath is uſed, every obſtruction of the veſſels will be timely removed; the viſcera and vital organs will be ſtrengthened and cleanſed; the bowels will be gently lubricated and opened: and the whole body will be found in a ſtate that will become quickly ſuſceptible of the benefits of ſea bathing; and of which, if thoſe who have attentively peruſed the foregoing caſes, or after a ſingle trial of the medicine, will conſult their own feelings, they will very ſoon be convinced. Nervous and weakly perſons ſhould only bathe every other day, and in ſome caſes only twice a-week, and take the Solar Tincture night and morning on the days they do not go into the bath. Thoſe who bathe every morning, ought to take a doſe of the medicine every evening. One ſingle bottle will quickly prove its efficacy, and eſtabliſh it as a cordial companion to the bathing places.

When cold bathing occaſions chilneſs, loſs of appetite, liſtleſſneſs, pain of the breaſt or bowels, a proſtration of ſtrength, or violent head-achs, it ought to be diſcontinued.

For the moſt plain and neceſſary directions in all caſes of infirmity and diſeaſe, the reader is particularly recommended to Dr. Sibly's improved edition of Culpeper's ineſtimable book, the Engliſh Phyſician, and Complete Herbal, with Sibly's Appendix and Diſpenſatory, ſold by all Bookſellers in town and country.

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Lewis & Hamblin, Printers, Paternoſter-row.